HAWAII TAX RATE DISTRIBUTION ESTIMATES

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FOREWORD

The objective of this study is to construct some estimates of the distribution of effective rates for Hawaii state and local taxes in 1960, and to indicate how the estimates are developed. This work, by its very nature, involves a considerable amount of detail. The exposition of such detail is apt to be a troublesome matter even when the audience is homogeneous. However, when as in the case of this study, the potential audience includes readers with a rather wide range of background and interest, exposition is even more of a problem. To deal with this difficulty it seemed useful to engage in some repetition in writing up the results. The benefit of this technique is that certain points are kept at hand for readers who are relatively unfamiliar with material of this type. One cost of the repetition may be tedium for more experienced readers. Hopefully the benefit exceeds the cost.

A conscious effort has been made to explain things as we go along, but in some cases explanations must be delayed to preserve continuity. The less experienced reader is advised to read through major sections rather than become "hung up" on technical items. Section V of Chapter 1 indicates the content of subsequent chapters. The chapters are introduced by a brief outline of the major sections, and concluded with summaries. The text includes specific reference to the Appendix Tables which themselves contain cross references to the text. The rather detailed table of contents functions as a comprehensive outline of the study.

Anyone familiar with the literature of "tax burden" studies will note our reliance upon the work of Musgrave, Daicoff, Brownlee, Groves and the Wisconsin Tax Study Group, Newman, and Gillespie. Specific references appear in the text, but I do wish to acknowledge them here.

In addition, the suggestions of several colleagues at the University of Hawaii have been helpful. In particular, acknowledgment is due to Tom Dinell, Herman Doi, Robert Kamins and Harry Oshima, all of whom read the entire manuscript, and to John Wise, Mits Ono, and the participants in Ryuzo Sato's seminar. Several typists worked on the manuscript, and particular thanks are due to Mildred Miyasato, Carole Miyashiro, Lynn Nakamura, and Helen Bissen. June Miyasaki and Daphne Kim managed the calculating chores in a really admirable way. I especially want to mention Gilbert Suzawa, an exceptionally capable research assistant, who joined the project in the closing stages. He helped label and cross reference the Tables and made important suggestions for the text. At this point, he knows more about the material contained in the Tables than I do.

I am willing to accept the responsibility of leaving the errors which remain uncorrected, if the readers are willing to accept the responsibility of finding them.

Ronald F. Hoffman

May 1967

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Chapter 1

INTRODUCTION AND SUMMARY

I. INTRODUCTION

This study is an attempt to say something useful about the question of who pays how much of the Hawaii state and local taxes. It is concerned with estimates of an actual situation rather than a pronouncement of what the appropriate policy should be. Therefore the scope is restricted to positive (or factual) considerations in the sense that normative issues such as who ought to pay how much of the total tax bill are not treated. The potential contribution of the study has two dimensions. One is a set of estimates, for 1960, of the proportion of income paid in Hawaii state and local taxes, by income brackets. The second is a detailed account, together with tables of data constructions, of the procedure employed in developing the estimates.

A. Estimate Limitation and Usefulness

The question of who pays how much of the tax seems to be important both for understanding an existing situation, and as a guide for proposed changes. Unfortunately, the only easy answer to this question must be a rather unsubstantiated guess. Careful consideration of the problem is not an easy task, but even this approach can yield only an estimate. Thus, it is necessary to insist that the tax distributions developed here are not the truth. They are only estimates, carefully made but subject to serious constraints of several sorts such as time, data, analytical tools, etc. Even so, there seems to be value in such an undertaking.

For one thing, it is more likely that crucial assumptions, often left implicit in casual discussions of this subject, will be made explicit in a systematic study. Indeed, there are occasions when alternative results (answers) must be offered because of contending assumptions. The same may be said with respect to the choice of concepts. Another aspect of the value of this type of study is that along the path from question to answer, the absence of data useful for policy matters becomes apparent, and a data requisition to fill in gaps suggests itself. Furthermore, to the extent that the details of the analysis are presented, a set of estimates may be checked for accuracy, revised and perhaps improved by accommodating appropriate contentions, or updated to reflect the

availability of more recent data. It is strongly suggested that all three undertakings, particularly the last be made on a regular basis, by some agent of the Executive of Legislative Branch of the State Government.

B. Use Limitation

Given the "facts" of total tax revenues, the estimates indicate the total dollars of tax applicable to the incomes in each bracket. Knowledge of this sort of information may lead one to conclude that taxes are too high or too low. However, this information is really too limited to support such a conclusion. Hawaii's state and local taxes provide certain goods and services for the community. Thus, for example, it is important to realize that, disregarding sheer waste, taxes may be high (or "too high") because in this particular location these items, for a specified quality level, are relatively expensive. They may be relatively expensive both because of higher (than average)input requirements to achieve a specified objective and because inputs are relatively high priced. If we wish to buy a relatively large quantity of relatively high quality items in a relatively high cost place like Hawaii, we must face the fact that this is expensive. In this context it does not appear very useful to conclude that taxes are too high or too low merely from estimates of total taxes and their distribution by income brackets. The same suggestion seems warranted with respect to estimates of effective tax rates (that is, the ratio of tax/income).

C. Benefit Limitation

It should now be apparent that the factual question of who pays how much of Hawaii's state and local taxes will, in this study, be answered only in terms of an estimate. In fact, several sets of estimates must be offered because it is not always a matter of logic alone as to which alternative assumptions and concepts are appropriate. Furthermore, all of the estimates are quite deficient because they are concerned only with the revenue side of the budget. I have not been able to make any estimate of the distribution of the benefits from Hawaii state and local expenditures, which would attempt to shed some light on the question of "who gets how much." This point is important because estimates such as developed here conceivably could be considered as background material for discussions of the equity of the Hawaii tax structure. But it seems that when the notion of tax equity is considered, what is (or ought to be) in mind is budget equity (equity, not necessarily proportionality), which considers both revenue and expenditure sides of the budget.

D. Further Limitations

Another caveat is that these estimates refer only to Hawaii state and local taxes and therefore exclude taxes paid by Hawaii residents to other state and local governments.[1] Furthermore, it must be recognized that these estimates were developed from a particular set of circumstances which existed in the data year (1960). The greater the departure from that situation, the less appropriate is the application of the estimates to tax policy problems.

E. Nature and Potential Contribution of the Estimates

From an equity point of view, with income as the relevant index of equality, the ability to pay consideration is manifested in the relation of tax to income, and therefore interest is centered on the ratio of tax to income (that is, the average effective tax rate). The position taken here is that it is the relation of tax payment to income, whatever its source, which is relevant, rather than a so-called balance among taxes on personal income, business income, property, etc. As I see it, the main opportunity for these estimates to contribute to decision making capability is with the respect to the pattern of relative positions. In other words, it is the picture of how these rate estimates stack up one against another--which income bracket has the highest rate, which bracket is next and by how much--that seems to be the primary way in which this work may be useful. With these ideas in mind, let us now turn to a brief discussion of what was done in this study and the results of doing it.

II. OVERVIEW OF THE PROCEDURE

A. Income Brackets[2]

The question under discussion is "who pays how much." "Who" refers, here, to Hawaii residents[3] and obviously it is impossible to discuss each one individually, so therefore "individuals" are grouped. A useful and reasonable basis for grouping is income[4] and therefore the estimates refer to eleven income brackets, the first running under $2,000, the last running $15,000 and over, and all the others at $1,000 increments except the $10,000 to $14,999 bracket.

B. Tax Components[5]

The assignment of Hawaii state and local tax dollars to resident income by brackets was done tax by tax: in fact most taxes were broken down into several components (the general excise was split into more than a dozen) which were then apportioned on an appropriate basis. In general, taxes were assigned on the basis of either the source or the use of income. For example, the rental component of the general excise was assigned on the basis of income source (e.g., rental income and corporate income received in dividends) in the case of the more conservative shifting assumption,[6] but with the more extensive shifting assumption this assignment was based on income use (housing expenditure). The income source data is published by the office of the (Hawaii) Director of Taxation, and the income use data comes from a 1960 - 61 study of Honolulu published by the U.S. Labor Department's Bureau of Labor statistics.[7]

C. Tax Shifting Assumptions[8]

The objective of making the tax/income ratio calculations under the (a) more conservative and (b) more extensive tax shifting assumptions was to construct a pair of extreme situations which would set limits for comparison. However, even under the (b) assumption of rather complete forward shifting, there are some components for which zero shifting is assumed. Similarly, under the (a) more conservative assumption, there are some components for which 100 per cent forward shifting is assumed. Thus, this pair of cases is not one of absolute extremes. Rather, each case is a combination of several "most likely" assumptions (which we are rather confident of) and several extreme assumptions (about which we are rather uncertain and therefore look at extreme opposites). In case (a) the extremes are all of the zero shift type, whereas in case (b) the extremes are 100 per cent forward shifting.[9]

The idea of tax shifting may be explained by way of example. A sales tax is levied and therefore has impact on the seller of a product. The structure of relative prices of products (outputs) and factors of production (inputs) will generally undergo adjustment as a result of the imposition of a tax. This adjustment will result in an adjustment of real income flows and wealth stocks of the members of the community. Assume the adjustments proceed with fully employed resources from an initial position of equilibrium to a subsequent equilibrium. If we say the tax is not shifted, what we have in mind is that the adjustment results in a decline, by the amount of the tax, in the real income of those who receive income

from sources upon which the tax was levied. On the other hand, if we say the tax has been completely shifted forward to the consumer, what we mean is that the adjustment results in a decline, by the amount of the tax, in the real income of those who use their income to purchase the products whose sale is subject to the tax levy.

This simple but only partial formulation leads to a consideration of tax shifting which corresponds to the concept of absolute tax incidence. A more complete and more appropriate pair of alternative formulations may be mentioned. The first considers the adjustment which results from the substitution of one tax for another of equal yield, with no change in the expenditure side of the budget. The second considers the adjustment which results from the imposition of the tax and the expenditure of the tax revenue by the government. These approaches involve the concepts of differential tax incidence and budget incidence respectively.

The calculation of the ratio of tax/income (as in this study) suggests the following. The observed income occurs as the result of adjustment (assuming equilibrium) to both the imposition of the tax and the expenditure of the tax revenues. The calculated tax assignments to both sources and uses of income represent reductions in income available for expenditure on goods and services other than those provided by the taxing authority. That is, the calculated tax assignments represent shares of the cost of expenditures by Hawaii state and local governments.

The effective tax rate estimates developed in this study may be used in a differential incidence calculation. One could, for example, compare the distribution of effective actual tax rates with the distribution of effective proportional income tax rates where tax yield is unchanged. But it should be noted that such a calculation assumes that identical income distributions exist under both tax structures.

D. Income Concepts[10]

Adjusted gross income (A.G.I.) is probably a quite familiar concept because of association with personal income tax returns. This concept was used as a basis for determining income brackets because more and better data (of the type relevant for this work) were organized this way. This means that the unit of account, or individual member of the group which makes up the bracket, is the Hawaii state personal income tax return. Usually this tax return represents more than one individual, and there would seem to be a rough

correspondence between the tax return and the family or expenditure unit. Although the inter-bracket uniformity of the distribution of this characteristic of correspondence is certainly doubtful, our figures indicate that the income bracket percentages for both income source and use do not show much variation when based on personal income compared to A.G.I.

The very act of aggregation relinquishes the opportunity for distinction among the positions of the members of the group. Therefore these estimates are not useful for a discussion regarding the equal treatment of equals (horizontal equity); rather the concern here is with the treatment of unequals (vertical equity). Of course the wider the income range covered by the bracket, the more costly (in terms of lost detail) is the aggregation practice.

The A.G.I. data can be improved for our use by making appropriate adjustments for the non-shifted portion of business taxes. In fact this was done, but the change does not produce any significant alteration of the results. To go a step further, a measure of broadened income was constructed. Roughly speaking, this was accomplished by making additions to A.G.I. to account for: (1) undistributed corporate profits, (2) non-shifted portion of federal and state corporate income tax, (3) employer contributions for social insurance, (4) unemployment insurance, (5) transfer payments (including welfare payments and veterans benefits), and (6) undistributed fiduciary income. Since all of these items may be expected to be distributed differently and non-uniformly through the income brackets, there is some effect on the resultant pattern of average tax rates. The reason for offering this alternative income measure is to suggest the nature of bias in the results due to the narrowness of A.G.I. Finally, one may adjust both A.G.I. and Broadened Income to arrive at a figure for income net of federal taxes. This too has been done and the tax rates which result appear in columns 3 and 5 of each of the Tables I through IV. (See Tables I to IV on pp. 7 thru 10.)

III. COMPOSITION OF THE SUMMARY TABLES AND THEIR DIFFERENCES

The data used here refer to 1960. Column 2 in Table I is headed: Total Tax/A.G.I., and below this there is a pair of columns of figures, one labeled % and the other Rank. The % figures represent the ratio of total tax/total income, for each income bracket;

TABLE I

TOTAL TAX: AVERAGE EFFECTIVE TAX RATE PER INCOME BRACKET BY INCOME CONCEPT

Conservative Shifting Assumption, No Adjustment (Neither Deductibility Nor Export)

	(1)	(2)		(3)		(4)		(5)	
Income Bracket	Total Tax (Thousands of Dollars)	Total Tax A.G.I. Percent	Rank	Total Tax A.G.I. minus Federal Tax Percent	Rank	Total Tax Broadened Income Percent	Rank	Total Tax Broadened Income minus Federal Tax Percent	Rank
Under $2,000	6,751.3	17.11	2	20.85	2	12.27	3	15.10	3
$ 2,000 - $ 2,999	5,734.1	11.89	5	14.32	5	8.08	11	9.55	11
$ 3,000 - $ 3,999	9,739.8	11.60	6	13.87	6	9.36	9	11.45	9
$ 4,000 - $ 4,999	11,332.4	12.53	4	15.04	4	10.74	4	13.26	4
$ 5,000 - $ 5,999	9,630.9	10.04	11	11.88	11	9.12	10	11.01	10
$ 6,000 - $ 6,999	11,242.6	10.99	8	13.08	9	9.75	7	12.15	7
$ 7,000 - $ 7,999	9,881.2	11.38	7	13.58	7	10.08	5	12.64	5
$ 8,000 - $ 8,999	8,711.0	10.44	10	12.43	10	9.58	8	11.94	8
$ 9,000 - $ 9,999	7,079.6	10.99	9	13.10	8	10.04	6	12.52	6
$10,000 - 14,999	25,953.4	14.42	3	17.88	3	13.03	2	17.02	2
$15,000 and over	46,873.6	29.29	1	40.70	1	19.26	1	31.50	1
Overall Total	152,930.0	14.78	(3)	18.16	(2-3)	12.15	(3)	15.86	(2-3)

TABLE II

TOTAL TAX: AVERAGE EFFECTIVE TAX RATE PER INCOME BRACKET BY INCOME CONCEPT

Conservative Shifting Assumption, With Adjustment (Deductibility and Export)

	(1)	(2)		(3)		(4)		(5)	
Income Bracket	Total Tax (Thousands of Dollars)	Total Tax A.G.I. Percent	Rank	Total Tax A.G.I. minus Federal Tax Percent	Rank	Total Tax Broadened Income Percent	Rank	Total Tax Broadened Income minus Federal Tax Percent	Rank
Under $2,000	5,722.9	14.50	1	17.68	2	10.40	1	12.80	2
$ 2,000 - $ 2,999	4,950.5	10.26	5	12.37	5	6.97	11	8.24	11
$ 3,000 - $ 3,999	8,290.2	9.88	6	11.80	6	7.97	6	9.74	7
$ 4,000 - $ 4,999	10,016.2	11.08	3	13.29	4	9.50	3	11.72	4
$ 5,000 - $ 5,999	8,868.0	9.24	7	10.94	7	8.40	5	10.13	5
$ 6,000 - $ 6,999	8,791.5	8.59	10	10.23	10	7.63	8	9.50	9
$ 7,000 - $ 7,999	7,474.6	8.60	9	10.27	9	7.62	9	9.56	8
$ 8,000 - $ 8,999	6,771.6	8.12	11	9.66	11	7.45	10	9.28	10
$ 9,000 - $ 9,999	5,554.1	8.62		10.28		7.88	7	9.82	6
$10,000 - $14,999	19,372.6	10.76	4	13.34	3	9.73	2	12.70	3
$15,000 and over	22,879.9	14.30	2	19.86	1	9.40	4	15.38	1
Overall Total	108,692.0	10.50	(4-5)	12.90	(4-5)	8.64	(5)	11.27	(4)

TABLE III

TOTAL TAX: AVERAGE EFFECTIVE TAX RATE PER INCOME BRACKET BY INCOME CONCEPT

Extensive Shifting Assumptions, No Adjustment (Neither Deductibility Nor Export)

	(1)	(2)		(3)		(4)		(5)	
Income Bracket	Total Tax (Thousands of Dollars)	Total Tax A.G.I. Percent	Rank	Total Tax A.G.I. minus Federal Tax Percent	Rank	Total Tax Broadened Income Percent	Rank	Total Tax Broadened Income minus Federal Tax Percent	Rank
Under $2,000	9,003.6	22.81	1	29.94	1	16.60	1	21.26	1
$ 2,000 - $ 2,999	7,017.3	14.55	5	18.20	5	9.96	11	11.98	11
$ 3,000 - $ 3,999	11,340.4	13.51	6	16.67	6	11.01	6	13.70	7
$ 4,000 - $ 4,999	13,366.6	14.78	4	18.33	4	12.77	3	16.10	4
$ 5,000 - $ 5,999	12,099.9	12.61	7	15.40	7	11.49	4	14.23	5
$ 6,000 - $ 6,999	12,129.7	11.86	9	14.54	9	10.66	9	13.49	9
$ 7,000 - $ 7,999	10,378.3	11.95	8	14.70	8	10.76	8	13.67	8
$ 8,000 - $ 8,999	9,264.6	11.10	11	13.57	11	10.32	10	13.04	10
$ 9,000 - $ 9,999	7,544.2	11.72	10	14.37	10	10.84	7	13.72	6
$10,000 - $14,999	26,872.4	14.93	3	19.25	3	13.74	2	18.32	2
$15,000 and over	25,790.1	16.12	2	23.08	2	11.43	5	17.88	3
Overall Total	144,807.0	13.99	(5-6)	17.78	(5-6)	11.79	(4)	15.50	(4-5)

TABLE IV

TOTAL TAX: AVERAGE EFFECTIVE TAX RATE PER INCOME BRACKET BY INCOME CONCEPT

Extensive Shifting Assumptions, With Adjustment (Deductibility and Export)

	(1)	(2)		(3)		(4)		(5)	
Income Bracket	Total Tax (Thousands of Dollars)	Total Tax A.G.I. Percent	Rank	Total Tax A.G.I. minus Federal Tax Percent	Rank	Total Tax Broadened Income Percent	Rank	Total Tax Broadened Income minus Federal Tax Percent	Rank
Under $2,000	8,784.9	22.26	1	29.21	1	16.20	1	20.74	1
$ 2,000 - $ 2,999	6,750.0	13.99	3	17.51	3	9.58	9	11.53	11
$ 3,000 - $ 3,999	10,870.2	12.95	5	15.98	5	10.56	5	13.13	5
$ 4,000 - $ 4,999	12,827.8	14.18	2	17.59	2	12.26	2	15.45	3
$ 5,000 - $ 5,999	11,733.1	12.23	6	14.93	7	11.15	4	13.80	4
$ 6,000 - $ 6,999	11,054.8	10.81	8	13.25	8	9.72	7	12.30	9
$ 7,000 - $ 7,999	9,341.3	10.75	9	13.23	9	9.68	8	12.31	8
$ 8,000 - $ 8,999	8,404.4	10.07	11	12.31	11	9.36	10	11.83	10
$ 9,000 - $ 9,999	6,917.7	10.74	10	13.18	10	9.94	6	12.58	6
$10,000 - $14,999	23,429.5	13.02	4	16.78	4	11.98	3	15.97	2
$15,000 and over	17,785.8	11.11	7	15.92	6	7.88	11	12.33	7
Overall Total	127,900.0	12.36	(6)	15.71	(6)	10.41	(5)	13.69	(4)

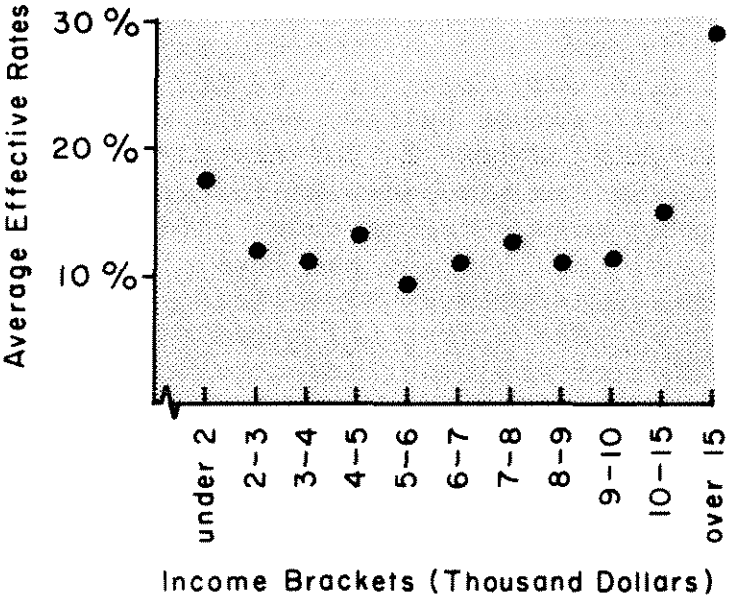
these ratios may be viewed as average effective tax rates. Thus, to construct an example, if the estimate for the $6,000 to $6,999 bracket is tax of $1 million and income of $5 million, the tax/income ratio is 20% and so we say that the average effective tax rate on income for incomes in this bracket is 20%.[11] The ranks are based on these rates (rank #1 being assigned to the income bracket with the highest rate, and rank #11 to the bracket with the lowest rate).

Table I presents four columns similar to column 2 (columns 2 through 5). Each shows a set of average effective tax rates and the accompanying ranks. Differences in these results are due to differences in the income concept (the denominator of the tax/income ratio) employed; the tax measure (the numerator of the tax/income ratio) is the same in each case. Tables II, III, and IV are similar to Table I. The differences in the results shown in each table for a given column (look at column 2, for example, in each table) are due to differences in the tax measure; income (the denominator) is the same for a given column (2) in every table. Each table is concerned with total Hawaii state and local taxes, but Tables I and II reflect the conservative tax shifting assumption (that no tax shifting occurred for almost all types of taxes, the most notable exception being that of the retailing portions of the general excise which in all cases were assumed to be shifted forward to the consumer. Tables III and IV reflect the more extensive tax shifting assumption (of rather substantial tax shifting from businesses, which are the impact site of the levy, to consumers). There is a common difference between Tables I and II and between Tables III and IV. This difference is that the results in Tables II and IV reflect an adjustment applied to account for (a) the deductibility of certain state and local taxes for federal income tax purposes and (b) nonresident owners among Hawaii business taxpayers; for Tables I and III no such adjustment has been applied.[12]

IV. OVERVIEW OF THE RESULTS IN THE SUMMARY TABLES[13]

The results yielded by these different calculations emerge with a rather consistent pattern of characteristics. In general, the middle income group of brackets (perhaps from $5,000 and certainly from $6,000 through $9,999 and perhaps even as far along as $12,000[14] has the lowest rate assignments compared to brackets below and above this group. In addition the five or so brackets within this group are treated rather uniformly (that is, their rate assignments are

fairly equal and so the overall tax rate structure is rather proportional in this income range). Thus a graph, with the average effective tax rate on the vertical axis and income (brackets) on the horizontal, traces a sort of horseshoe shape with a flat bottom in the middle income range. It is important to point out, however, that in order to delineate the five income brackets between $5,000 and $9,999 it was necessary to interpolate our income and expenditure pattern data. For this reason the interbracket detail of our results (the tax rate estimates) in this income range may not be as significant as that of the rest of the income scale.[15]



The bottom income bracket (under $2,000) maintains a relatively high rate assignment. Generally speaking, this rate is outstanding in two senses: (1) there is a rather substantial difference between the bottom bracket rate and the next highest rate; and (2) there is a large difference between the bottom bracket rate and the rates assigned to the other income brackets at the low end of the income scale.

Some of the other characteristics of the distribution of rates are more sensitive to the different calculations. For a given income concept (A.G. I., for example), use of the more conservative assumption regarding shifting with no adjustment (see column 2 of Table I) results in a rather high rate assignment for the top income bracket ($15,000 and over). However if we switch to the more extensive shifting assumption (and change nothing else) the rate assigned

to the top income bracket declines substantially, and in fact becomes lower than all other rates, especially those of the lower income brackets. (See column 2 of Table III). This effect of the change in the tax shifting assumption is reasonable, given the nature of the source distribution of income and expenditure patterns, the importance of indirect taxes, and the fact that this change in assumptions is reflected in a switch from tax assignment based on income source to the income use basis.

When the more conservative shifting assumption is maintained, the introduction of the adjustment (for federal tax deductibility and nonresident ownership) results in a non-uniform decrease of all rates, with the most substantial decline occurring in the two highest income brackets (especially in the top one). Again, this result (see column 2 of Table II) corresponds to what is established analytically. Similarly, different income concepts yield different results, but the displacements do not appear to be major (except perhaps the effect on the $2,000 to $2,999 bracket of the switch from A.G.I. to the Broadened Income concept). This glimpse of the results is not the place to pursue this line, but a more detailed examination including individual treatment of the more important component taxes is presented in subsequent chapters.

To the extent that these estimates are accurate, one may wish to confront them with his own notion of an ideal pattern. Lack of congruence between the "actual" and the ideal would appear to indicate a guide for policy. As was mentioned, however, it is not the purpose of this study to make such recommendations, let alone to present a formula to be followed. And it is important that consideration of these estimates always take place with the context of the remarks in the preceding sections of this Chapter.

V. SUBSEQUENT CHAPTERS

Chapter 2 deals with alternative income concepts and estimates and the material is somewhat technical. Chapter 3 presents our results (the tax rate estimates) in a set of graphs and attendent comments. Chapters 4 (overall taxes) and 5 (component taxes) also deal with the results, but give a bit more detail than is found in Chapter 3. Chapter 6 reviews the procedures followed in constructing the estimates and therefore is rather technical. Chapter 7 consists of some remarks in summary. The Appendix contains the tables of supporting material.

The reader who is mainly interested in the general nature of the results may prefer to read Chapters 1, 3, and 7, and just the introductory paragraphs of the other chapters and perhaps glance at the rest. Chapters 4 and 5 are mainly for readers interested in the details of the effects which changes in assumptions and income concepts have on the tax rate estimates. Chapter 6 is directed to those who wish to reconstruct or extend the study. The Appendix Tables are essential for readers who wish to pursue anything more than just a superficial interest in the report.

Chapter 2

INCOME: CONCEPTS AND DATA

This chapter will deal with two main issues. One, taken up in Section I, is the selection of the basic income concept which is used to determine the bracket groupings. We select the A.G.I. concept which appears in personal income tax data. This basic or "narrow" concept is also used as the denominator in the calculation of a set of estimates of the effective tax rate structure. Section II deals with the second main issue which is the construction of a "broadened" income concept. Section III is concerned with income after tax (both A.G.I. and Broadened Income). Section IV presents some brief comparisons of the distributions of the several income concepts.

Some readers may find the material in this chapter more technical than their interest. In this case, one may note the content here by reading the headings. In particular, subheadings 1 through 8, Part A, Section II will provide a quick view of the difference between A.G.I. and "Broadened Income." Thus, those who are interested mainly in the general findings may skip Chapter 2 and go directly to Chapter 3.

I. THE NARROW INCOME CONCEPT

With regard to the selection of the "narrow" income concept, a pair of items will be looked at. First, some considerations involving the size of bracket distribution are examined and then the subject of the total amount of income to be distributed is discussed.

A. Income Size Bracket Distributions

There are several sets of income size bracket distribution data for Hawaii. These are basically of two types: U.S. Federal Census data and income tax return data. The income tax return data are compiled separately from both the U.S. Federal and Hawaii State personal income tax returns.

None of these sets of statistics are ideal for the purpose of this study. This is true especially because the chosen income concept is used both (a) as the criterion for establishing income classes for the purpose of tax allocation and (b) as an index for calculating an effective tax rate distribution. Because of this pair

of uses, particularly the latter one, it is difficult to avoid association with the implicit assumption that this income concept is the appropriate tax base. Therefore, the assumption is explicitly denied. Our choice of concept is based on statistical practicality rather than theoretical considerations.[1] Let us now take note of some of the main differences between the available sets of income data.

1. Data differences and the selection of income tax return income data

In the census data the unit of account is separated into families and unrelated individuals (which may be combined under the general term "household"), whereas the tax return data refer to the aggregated tax returns, which include individual returns and joint returns. Incidentally, the B.L.S. expenditure pattern data uses the family unit, but defines the term as broadly as the "household" just referred to. Furthermore, the tax return data brackets refer to adjusted gross income (A.G.I.), but the census refers to a money income concept which is different mainly in that transfer payments (such as unemployment insurance, welfare payments, social security, etc.) are included but receipts from the sale of property not part of business inventory (and therefore capital gains) are excluded.[2] Also, the most recent census (1960) reports income for 1959, tax return data for 1960 are available (in fact tax return data are reported annually).

Even though the census unit (family or "household") seems preferable to the tax return, there are other considerations which led to the decision to use the tax return income data. The tax return data include income size bracket distributions by source of income (e.g., wages, profits, etc.) which are necessary for this study. Also, the census data report the number of units per bracket, but not total dollars received (these must be estimated for each bracket by assuming a mean income) whereas the tax returns report dollar totals.

Given the selection of the tax return data, there are three related matters to consider in this connection. One is the choice between federal and state income tax return data. The second is the use of tax return income data in combination with the B.L.S. expenditure pattern data which uses a "household" unit and a different income concept. The third is the consideration of some bias involved in the use of tax return data. The second item is perhaps most

important and therefore will be covered first.

2. Combined use of income tax return income data and B.L.S. expenditure data

No attempt was made to adjust for the fact that the income data brackets refer to tax returns while the expenditure data brackets refer to "household".[3] Furthermore, it was decided not to adjust for the fact that the expenditure data brackets refer to money income (but including food and housing received as income) after taxes (all income, poll and personal property taxes). In order to make the adjustment it would have been necessary to use information about intra-bracket distributions which was not available. However, the following remarks may aid in understanding the problem.

Some of the units at the upper end of the bottom bracket of after-tax-income would appear in the next higher bracket of before-tax-income, therefore some members of the group would leave but none would enter. From this it follows that there would be entry to and exit from all other brackets except the top one where of course there would be no exit. To the extent that tax payments are absolutely larger the higher the income bracket,[4] the likelihood of a member shifting to a higher bracket (i.e., pre-tax compared to post-tax) is greater the higher is his initial (after-tax) bracket, for any given intra-bracket percentile position. For this reason the number of members shifting out of all brackets (except the top bracket) is likely to be larger than the number shifting in. However, this tendency toward an increasing upward bias (in number of members) is countered to the extent that lower brackets have absolutely larger membership than higher brackets (and as was mentioned the intra-bracket distribution differences are also relevant). Thus this before-tax, after-tax aspect results in some uncorrected over-allocation of members to the bottom bracket and underallocation to the top bracket, with balancing type tendencies operating with respect to the other brackets. On the other hand, the B.L.S. brackets count transfer payments as income, but this item is not included in A.G.I. With respect to this aspect of the income concept difference, the effect on the bottom bracket is just the opposite as discussed above (consider, for example, that transfers may be viewed as negative taxes), and therefore this pair of forces tend to balance. The same is suggested for the intermediate brackets (where the individual forces tend to balance also).[5] For the top bracket the situation is one of outflow only, which tends to balance the inflow result noted above. Therefore, it was decided that the

adjustment was not worthwhile.

So much for the difference in the income concept in these two sets of data. A further point involves the difference in their income bracket intervals. This matter is discussed below in item 5.

3. Selection of Hawaii State income tax return income data

The U.S. Treasury Department, Internal Revenue Service, publishes Hawaii income data based on federal personal income tax returns in Statistics of Income, and the Hawaii Director of Taxation publishes Hawaii income data based on state personal income tax returns in Patterns of Income.[6] Both of these develop total income (A.G.I.) distributions which turn out to be quite similar. The U.S. publication (Statistics) refers to those returns filed in the Honolulu I.R.S. Office (and therefore includes some returns of military personnel, for example, who do not file Hawaii income tax returns) whereas the Hawaii volume (Patterns) shows resident and nonresident return information separately. It was decided to use the data from Patterns because it included Hawaii income source distributions. (The only income source data in Statistics are for the U.S. as a whole.) So much for the discussion of available income size bracket distributions with regard to the selection of the narrow income concept.

4. Some bias

Let us take a brief look at some bias involved in the use of tax return data. In particular we are concerned with the under $2,000 income bracket. Consider, for example, the excise tax component. The estimated excise tax rate for this bracket is the ratio of tax to income, where tax is the total dollars of excise tax assigned to the bracket, and income is the total dollars of income assigned to the bracket.

Using tax return data, the income figure is A.G.I., and the assignment to the under $2,000 bracket is the total from returns with A.G.I. under $2,000. Some of the returns in the category represent income for less than a full year (e.g., a taxpayer who remained in Hawaii for three months during the year and had $1,800 income during that period). Ideally, the under $2,000 bracket would represent units with annual income under $2,000. To the extent that fractional year returns appear in this bracket, there is an overassignment of income here (and an underassignment to other brackets).[7] Furthermore, we may consider that an overassignment of income to this

bracket results from dependents (such as children who work part-time) who file separate returns. An upward bias in the amount of income assigned to the bracket results in a downward distortion of the tax rate estimate.

Now as regards the tax figure (the numerator in the tax/income ratio) we note the following. Tax is assigned to brackets on the basis of either the use or the source income.[8] With respect to the use income, assignments are based upon expenditure parameters (an expenditure parameter for an income bracket is the proportion of total expenditure which is accounted for by the bracket). The B.L.S. Expenditure Survey provides, for particular items, an average expenditure on the item by a member of the bracket. The Survey includes both families and unrelated individuals and classification as to income bracket is based upon the respondent's annual income. To calculate total expenditure on the item by the members of the bracket, the average expenditure figure was multiplied by the number of units (families and unrelated individuals) in the bracket. The number of units came from U.S. Census data, where, again, respondents were classified on the basis of annual income. Thus the use of income assignment did not involve the aforementioned tax return data bias. The source of income assignment (of the excise tax, for example) would include such bias, because source of income information comes from tax return data (in fact source data is a major reason for using tax return data). However, the upward bias in the tax figure would tend to be balanced by the upward bias in the income figure, and as a result the distortion of the estimated tax rate would be reduced. Therefore, the rates estimated with the conservative shifting assumption, which refer to tax assignments based relatively more on the source of income would involve relatively less distortion than the extensive assumption rates (which rely more on the use of income assignments). For the under $2,000 bracket the former rate estimates are lower than the latter, and the latter rate estimates involve more of a downward bias.

5. Bracket intervals

Patterns has A.G.I. brackets $6,000 - $7,999 and $8,000 - $9,999. In the interest of presenting as much detail as feasible, these two brackets were disaggregated into four brackets: $6,000 - $6,999, $7,000 - $7,999, $8,000 - $8,999, and $9,000 - $9,999. This was done by making use of the data on A.G.I. (both total and by source) for these more detailed brackets which appear in Statistics of Income. In Statistics, data for income by source (such as wages, profits, etc.) are given for the U.S. as a whole, but not for

individual states. However, the U.S. source distribution data for these more detailed brackets are useful here, especially because of the close agreement of the U.S. source distribution information with the Hawaii data shown in Patterns.[9]

In general, linear interpolation is used for the disaggregation. As an example, Statistics shows 12.17% (denote it a) and 10.27% (denote it b) as the percentages of total wages and salaries in the $6,000 - $6,999 and $7,000 - $7,999, brackets respectively, and 22.44% is the sum (denote it s) of these two percentages (s = a + b). Patterns show 20.07% of wages and salaries (group A) in the bracket $6,000 - $7,999,[10] and our objective is to split this percentage (denote it m) between $6,000 - $6,999 and $7,000 - $7,999 brackets (denote these percentages c and d respectively). This is done by defining $c = \frac{m}{s}(a)$, and $d = \frac{m}{s}(b)$. That is, c is an adjusted version of a, where we adjust by the ratio $\frac{m}{s}$.[11] Thus we calculate $c = \frac{20.07}{22.44}(12.17) = 10.89\%$, and $d = \frac{20.07}{22.44}(10.27) = 9.18\%$. A similar operation is done for the other income source components for both the $6,000 - $7,999 range and the $8,000 - $8,999 range. Total A.G.I. was handled in a similar fashion.[12] The results of the calculations appear in Appendix Table 19.

The B.L.S. Expenditure Survey Study has the following brackets: under $2,000, $2,000 - $2,999, $3,000 - $3,999, $4,000 - $4,999, $5,000 - $5,999, $6,000 - $7,499, $7,500 - $9,999, $10,000 - $14,999, and $15,000 and over. The following procedure was used to disaggregate the pair of brackets between $6,000 and $9,999 into four brackets at $1,000 intervals.

Census data shows the number of units (families and unrelated individuals) for each of the brackets to be constructed. The $7,000 - $7,999 bracket was constructed by assigning the $6,000 - $7,499 expenditure pattern to 1/2 of the units in the $7,000 - $7,999 range and assigning the $7,500 - $9,999 expenditure pattern to the other 1/2 of the units in the $7,000 - $7,999 bracket. The $7,500 - $9,999 expenditure pattern was assigned to both the $8,000 - $8,999 bracket and the $9,000 - $9,999 bracket. The $6,000 - $7,499 expenditure pattern was assigned to the $6,000 - $6,999 bracket.

It is evident that this procedure involves bias. The expenditures of the $6,000 - $6,999 bracket are certainly biased upwards and the same probably is true for the $8,000 - $8,999 bracket. In the $7,000 - $7,999 bracket the use of the $6,000 - $7,499 and the $7,500 - $9,999 expenditure patterns introduce a downward bias and

an upward bias respectively, and it is not clear which way the balance goes. The expenditures of the $ 9,000 - $ 9,999 bracket are certainly biased downwards. It follows that the calculated tax assignments based on expenditure patterns and the resultant tax rates are biased in the same directions as the expenditure estimates.

The available data was insufficient to support further adjustments. But although the results (tax rate patterns) are distorted by the bias, the distortion is not serious for the degree of precision claimed for a study of this type.

To estimate the magnitude of the distortion, consider the $9,000 - $9,999 income bracket as a case in point. It can be shown that where R_i = the proportion of expenditures accounted for by bracket i, $R_i' = \frac{R_i(1+\alpha)}{1+\alpha R_i}$, where α = the percentage adjustment for bias in the average expenditure by a member of the ith bracket.

In the $9,000 - $ 9,999 bracket, R = .054, for all goods and services.[13] If we suppose that the α = 10% is the correct upward adjustment, R' = .0587. With α = 20% in this case, R' = .064. Thus even if we judge the bias (in the average expenditure by a member of the bracket) to be as great as 20%, the resulting distortion in the tax rate estimate for the bracket is less than 20%, which in this case is less than 1 percentage point.[14] In fact, a bias of α = 10% seems more reasonable,[15] and here the resulting rate distortion is about 1/2 of 1 percentage point.[16]

B. The Total Amount of Income to be Distributed

Now a few remarks are in order with regard to the total amount of income to be distributed.[17] For the purposes of this study it is appropriate to consider information from both taxable and nontaxable returns. The data from Patterns shows income (A.G.I.) of about $1,036 million (net of about $11 million nonresident income and $1 million loss group) based on about 193,000 returns (net of about 4,000 nonresident returns). Statistics indicates about $1,148 million based on about 196,000 taxable returns. Estimates from Census data run about $1,179 million using an overall mean income figure, but aggregations of bracket totals estimated by midpoints run between $1,320 and $1,324 million. The amount from Patterns is about 87% of the Statistics figure. It was decided not to make an upward adjustment in the Patterns data because of lack of information necessary to make anything other than a uniform adjustment (e.g., divide each bracket income total by .87), which would not be very enlightening given the emphasis of this study on the relative situations of brackets.

II. THE BROADENED INCOME CONCEPT

A. The Broadened Income Adjustment

So much for the basic or narrow income concept, now attention will be turned to a broader (broadened) income concept. A suitable way to discuss the broadened income concept is to indicate its development from A.G.I., and the transformation will be examined here on an item-by-item basis. The results are shown in Appendix Table 12.

1. Government transfer payments

The addition of government transfer payments is based on the idea that they represent income (in addition to A.G.I.) available to pay taxes.[18] The amount of transfer payments involved is $65 million (about 6% of A.G.I.) as shown in the U.S. Commerce Department Survey of Current Business,[19] and our objective is to allocate the transfer total among income brackets. To accomplish the allocation, Gillespie's transfer payment percentage distribution, calculated for the U.S. as a whole, was used.[20] One problem is that his brackets do not coincide with ours. In considering an adjustment for this lack of coincidence note that the dollar amount of transfers received by a bracket depends upon several characteristics, such as the number of units in the bracket, the average income, and the intra-bracket distribution. Naturally, movement from a lower to a higher bracket implies movement from a lower to a higher average income. But in the very low brackets movement to each higher bracket involves movement to a bracket with a larger number of people. Even if per capita transfers are negatively related to average income, the dollar amount of transfers in the higher income bracket can be larger than in the lower income bracket if the number of units in the higher income bracket is sufficiently large compared to the lower bracket. Where the frequency distribution of units by income brackets increases monotonically to a maximum and then decreases monotonically, at the upper end of the tail (i.e., to the right of the maximum) each succeedingly higher bracket involves a smaller number of units and therefore an unambiguously smaller dollar amount of transfers.

The technique used to adjust Gillespie's distribution to our bracket is as follows. The Gillespie data shows percentages by income brackets for transfer payments and for families. But his brackets run from $5,000 - $7,499, $7,500 - $9,999, and $10,000-and-over. We construct a Lorenz-type graph with cumulative per cent of families on the horizontal axis and cumulative per cent of transfer payments on the vertical axis. Seven points are established on the graph by Gillespie's information (cumulative per cent of transfers associated with cumulative per cent of families for each of his seven income brackets). We pass a smooth Lorenz-type curve through these points.

In order to disaggregate the income brackets, the percentages of families in the more detailed brackets are estimated. A.G.I. data for the U.S. as a whole is used to estimate the per cent of families which is accounted for by each $1,000 bracket.[21] With this more detailed information we can, for example, locate the position on the horizontal axis associated with the $5,000 - $5,999 bracket. We can then read off, from the constructed Lorenz-type curve, the associated per cent of transfers for this income bracket.[22]

2. Undistributed corporate profits

The next item to be added in moving from narrow to broadened income is undistributed corporate profits. In line with the basic approach of assigning taxes to (income brackets of) individual taxpayers, it is consistent to allocate corporations' retained income to the owners. For the U.S. as a whole, undistributed corporate profits were (in 1960) $7.5 billion[23] and 0.39% of the total reported dividend income appears on U.S. federal personal income tax returns filed in Hawaii.[24] Therefore, $29,250,000 = [.0039 (7.5 billion)] is the estimated amount to be allocated among income brackets on the basis of the percentage distribution of dividend income.[25] It is recognized that this procedure assumes a uniformity in corporate dividend policy.

3. Unshifted federal corporation income tax

The unshifted portion of federal corporate income tax is another addition (to A.G.I.). In fact, the rationale for this--that it is income which is paid in taxes but does not show up in A.G.I.--suggests that all unshifted business taxes be treated this way, but adjustments here are confined to significant amounts.[26] For the U.S. as a whole (in 1960), federal corporate income tax liability was

$22.3 billion,[27] and .39% of this is $86.97 million. For the zero shift hypothesis (conservative shifting assumption), this amount is allocated to income brackets via the dividend income percentage distribution. For the 1/3 forward shift hypothesis (extensive shifting assumption), $57.98 million (= 2/3 $86.97) is allocated to income brackets.[28]

4. Unshifted State corporate income tax

Similarly the unshifted portion of the state (Hawaii) corporate income tax is added. Hawaii Income Patterns--Corporations, 1960 shows collections of this tax amounted to about $5.068 million, but not all of it is necessarily allocable to local income recipient brackets. Patterns--Corporations (Table III, page 9) shows taxable income of domestic and foreign corporations of $73.5 and $26.5 million respectively. An estimate[29] that 40% of dividends distributed by domestic corporations flow out to nonresident shareholders led to an estimate that residents account for 60% of the ownership of domestic corporations. Thus, with respect to the portion of the tax which is allocable to domestic corporations (73.5%), 60% is assigned to residents, that is (.6)(.735)($50.68 million) = $2.235 million. With regard to the 26.5% of the tax which is allocable to nondomestic corporations, the .39% (the previously mentioned resident portion of total U.S. shareholdings) estimate is applied, that is (.0039)(.265)($50.68 million) = $2.235 million. With regard to the 26.5% of the tax which is allocable to nondomestic corporations, the .39% (the previously mentioned resident portion of total U.S. shareholdings) estimate is applied, that is (.0039)(.365)($5.068 million) - $5.2 thousand. Thus, the total amount involved is $2240.2 thousand (= $2235 + $5.2). For the zero shift hypothesis (conservative shifting assumption), the $2240.2 thousand is distributed among income groups according to the dividend income percentage distribution. For the 1/3 forward shift hypothesis (extensive shifting assumption), $1,493.5 (= 2/3 $2240.2) thousand is distributed in the same fashion.[30]

5. State bank tax

Another item handled as the domestic corporate income tax is the tax paid by banks and other financial corporations, at the rate of 10% of taxable income, in lieu of all taxes except real property tax. The total amount of tax involved is only about $544 thousand. For the zero shift hypothesis (conservative shifting assumption), $326,390 (= 60% of $543,983) is assigned, and for the 1/3 forward shift hypothesis (extensive shifting assumption), $217,593

(= 2/3 $326,390) is assigned.[31]

6. Social security

Further extension of the income concept is achieved by adding in that portion of the employer's contribution to social security which is assumed to be shifted backward to the employee (that is, this is considered income which does not show up in A.G.I.).[32] It was decided to use the extreme assumption of 100% backward shifting. Total contributions to social security amount to about $34.3 million ($29.1 million federal and $5.2 million state and local),[33] and half of this is the employer's contribution of $17.2 million. In order to distribute this by income bracket, it is necessary to construct a "taxable wages" series based on 3% contributions on a wage earner's earnings of up to $4,800. As indicated in Appendix Table 52, this was done by taking 3% of all wage and salary income in each bracket under $5,000. For income of $5,000 and over, the number of returns in the bracket was multiplied by $144 (= 3% of $4,800). Consideration of incomes up through the $14,999 level (which account for 90% of wages) just exhausts the $17.2 million amount.

7. Unemployment insurance

Unemployment insurance is handled in a fashion similar to the social security item above, for similar reasons. The information is presented in Appendix Table 53.

8. Undistributed fiduciary income

The final item involved in the extension of the narrow income concept (A.G.I.) to the "broadened income" concept is undistributed fiduciary (estate and trust) income. An estimate of undistributed fiduciary income was obtained by subtracting an estimate of income paid out by estates and trusts to beneficiaries[34] (about $5.5 million) from an estimate of total income of Hawaii estates and trusts[35] (about $22.7 million). The resultant $17.2 million is apportioned to income brackets based on the Hawaii source distribution of estate and trust income.[36]

III. FEDERAL TAX PAID ADJUSTMENT

So much for the "broadened income" adjustment. Now attention will be turned to a by-bracket estimate of federal tax payments. This distribution is constructed item by item, and is used to calculate the distribution of income after federal tax payments. The results appear in Appendix Tables 54 and 13.

As a pair of "before federal tax" income concepts have been considered, a pair of "after federal tax" income concepts may be developed: A.G.I. less federal tax payments, and "Broadened Income" less federal tax payments. The relevant taxes may be grouped as: those to be deducted from both income concepts, and those to be deducted from "Broadened Income" only. Furthermore, some taxes are dealt with under alternative shifting assumptions and therefore alternate results are presented.

A. Federal Taxes Deducted From Both Narrow And Broadened Income

Federal taxes to be deducted from both income concepts will be taken up first.[37]

1. Federal personal income tax

The federal personal income tax is the largest item[38] among the federal taxes considered.[39] The federal data[40] on the distribution of this tax and A.G.I. by income brackets for Hawaii were used to establish average tax rates for each bracket (i.e., the ratio of federal personal income tax payments to A.G.I., for each bracket). These rates were then applied to the state A.G.I. data[41] to calculate the bracket assignments of dollars for this tax.[42] This information is presented in Appendix Table 55.

2. Employees' contributions for social security

Employees' contributions for social security amount to about $17 million. The distribution is handled via the "taxable wages" series discussed above in connection with the employer's contribution item in broadened income.[43]

3. Gift and estate taxes

Gift and estate taxes together amount to about $2 million. It was assumed that these taxes are paid only by members of A.G.I.

brackets of $10,000 and above, and source distribution data from Patterns was used to make the allocation between the top two brackets.[44]

4. Federal excise taxes

The next item of concern is the forward shifted portion of federal excise taxes. The total amount allocated to Hawaii is about $34.7 million.[45] It is assumed that this is all shifted forward to consumers, and the distribution to income groups is made on the basis of expenditures for all goods and services.[46]

5. Corporate income tax

The portion of federal corporate income tax payments assumed to be shifted forward to the consumer is handled under alternative assumptions of zero (conservative) and 1/3 (extensive) shifting. The total amount allocated to Hawaii is about $83.8 million,[47] and under the 1/3 forward shifting assumption about $27.9 million is distributed to income brackets on the basis of expenditures for all goods and services.[48]

B. Federal Tax Deducted From Broadened Income

Now with respect to federal taxes to be deducted from the Broadened Income concept only, there are two items. One, that portion of the employer contribution for social security taxes which is assumed shifted backward to employees (assumed here to be 100%), is handled in the same manner as indicated above for the employee contribution. This amount is about $17.3 million.[49] The other item is the unshifted portion of the federal corporate income tax. As mentioned above, the total assigned to Hawaii is $83.8 million.[50] Under the zero (conservative) forward shifting assumption this total amount is deducted from Broadened Income (because Broadened Income includes this item), and under the 1/3 forward (extensive) shifting assumption, $55.9 million is involved. In both cases the allocation of the unshifted portion to income brackets is based on shares of dividend receipts.[51] The shifted portion is assigned to income brackets on the basis of expenditures on all goods and services.[52]

IV. CONCLUDING REMARKS

Appendix Table 13 contains the dollar distributions of the several income concepts discussed here. Appendix Table 10 presents the percentage size distributions for all of these income concepts. These estimates indicate that the patterns for all the income variants are rather similar to one another. Some of the more apparent differences may be noted by referring to Table 10.

1. Compared to A.G.I., the percentage distribution of A.G.I. after-tax involves a "loss" to the top income bracket of about 1½ percentage (from 15.4% to 13.7% of the total) or about 10% of its share (under both shifting assumptions).

2. The percentage distribution of Broadened Income, when compared to A.G.I., shows the two lowest income brackets "gain" (less than 1 percentage point, but about 20% of their share), the next two brackets remain about even, all other brackets except the top bracket "lose" about 10% of their shares, and the top bracket "gains" 4 percentage points (about 25% of its share). These results hold for both shifting assumptions except for the top bracket "gain" which is 3 points with the extensive shifting assumption.

3. For Broadened Income after-tax compared to A.G.I., there is some "gain" for the bottom pair of income brackets and some "loss" for the brackets between $8,000 and $15,000. These results occur under both shifting assumptions.

4. Compared to Broadened Income, the percentage distribution of Broadened Income after-tax involves a "loss" for the top income bracket (which is similar to the case of A.G.I. after-tax compared to A.G.I.).

The results noted above are understandable given the nature of the adjustments. The items in the adjustment of A.G.I. to Broadened Income may be separated into two sets. One set consists of transfer payments ($65 million), the employer's share of social security ($17 million), and unemployment insurance ($5 million). The total is about $87 million and it was distributed relatively heavily to the lower income brackets (compared to the rest of the income range). The second set consists of undistributed corporate profits ($30 million), unshifted corporate income tax ($89 million under the

conservative shifting assumption or $59 million under the extensive shifting assumption), bank tax ($.3 million), and undistributed fiduciary income ($17 million). The total is about $135 million (or $107 million, depending upon the shifting assumption), and it was distributed rather heavily toward the upper income brackets.

Regarding the adjustments of before-tax to after-tax income, the following is noted. For A.G.I. after-tax the adjustment items are federal personal income tax ($139 million), the employee's share of social security ($17 million), estate and trust and gift taxes ($2 million), federal excise tax ($35 million), and shifted corporate income tax ($28 million). The total is about $221 million and the distribution was rather heavily toward the upper income brackets except for the social security item which went relatively more to the lower income brackets, and the federal excise and corporate income tax items which were distributed rather heavily toward both extreme ends of the income range. Finally, for Broadened Income after-tax, the adjustment items are the same (as with A.G.I.) with the addition of the employer's share of social security ($17 million) which goes rather heavily to the lower income brackets, and corporate income tax ($84 or $56 million, depending upon the shifting assumption) which goes rather heavily to the higher income brackets.

Chapter 3

GRAPHICAL PRESENTATION OF RESULTS

This chapter examines the estimates based on the A.G.I. concept by presenting the results in several graphs and attendant comments. Sections I and II deal with the overall tax structure and the major component taxes respectively. This material considers alternative shifting assumptions (with and without specified adjustments) and indicates their effects by offering comparisons of the resulting tax distributions. Readers interested in a more extensive and detailed discussion of the estimates are referred to Chapters 4 and 5 (in addition to this one).

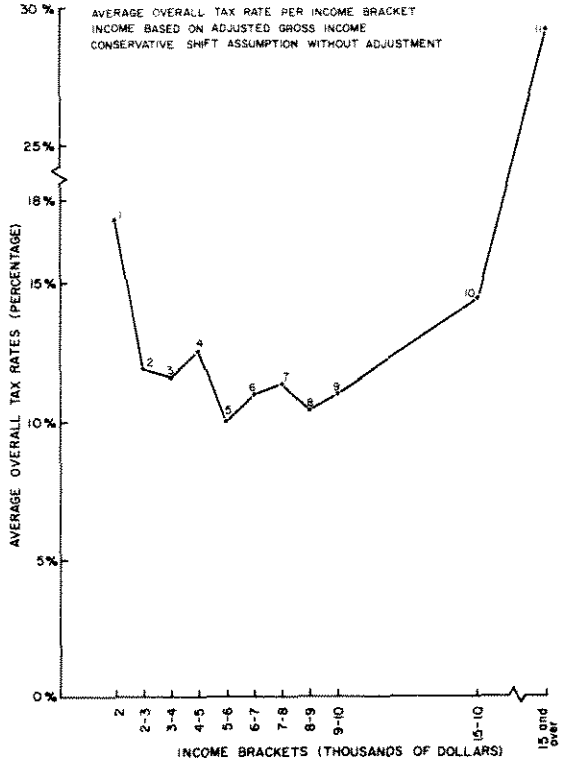
I. OVERALL TAX STRUCTURE

A. Conservative Shifting Assumption, No Adjustment (Neither Deductibility Nor Export)

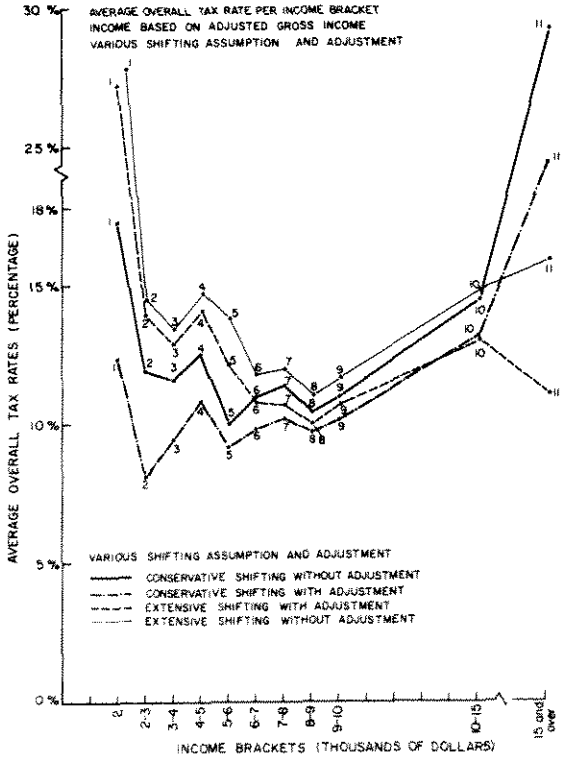
Refer to Graph 1-a. This graph is a picture of the information in column 2 of Table I (page 7). Therefore, this figure relates average overall tax rates (shown on the vertical axis) to income brackets (shown on the horizontal axis). The data involves the conservative shifting assumption without adjustments, and the A.G.I. concept, and this will be considered as the "reference case".[1] There are eleven points located in the graph space, one for each of the income brackets. These points or dots are consecutively numbered from 1 (for the under $2,000 bracket) to 11 ($15,000 and over).[2] The vertical position of each dot indicates the tax rate associated with the income bracket. The dots are connected by line segments to facilitate reading.

Note the high position (at 17%) of bracket number 1 (the under $2,000 income bracket), the cluster of brackets 2, 3, and 4 in lower position (at 12%), the cluster of brackets 5 through 9 in the lowest position (at 11%), and the higher positions of brackets 10 (at 14%) and 11 (at 29%). In fact, given the degree of precision in these estimates, it seems reasonable to "smooth out" the rather minor differences among the brackets 2, 3, and 4, and among the brackets 5 through 9. This "smoothing" would reveal a sort of horseshoe or "U"

GRAPH 1-a



GRAPH 1-b



shaped curve, with bracket #1 on the upper left-hand corner, bracket #11 on the upper right-hand corner, and the rather flat bottom of the curve running between $5,000 and $9,999.[3] This pattern of estimates indicates that the average overall tax rates are relatively high for the brackets on the arms of the "U", and relatively low and invariant for the brackets along the floor of the "U". The lower income brackets fall along the left arm, the middle income brackets fall along the floor, and the higher income brackets fall along the right arm of the "U". Thus the lowest rates are associated with the middle income brackets, and higher rates are associated with the brackets at both ends of the income scale. Briefly, clues for the relatively high rates for the lower and the higher income brackets are, given the nominal tax structure, to be found respectively in the shape of expenditure patterns and in the source distribution of income.[4]

Much the same pattern appears when the tax data are handled under the more extensive tax shifting assumption, and when the adjustment for tax deductibility and export is made. However, it is perhaps instructive to note where differences develop relative to the reference case. Refer to Graph 1-b. Here the line of heavy (thick) solid segments repeats the reference case from Graph 1-a. In addition, there are three other lines and each portrays a different case.

B. Extensive Shifting Assumption, No Adjustment (Neither Deductibility Nor Export)

Refer to the line of light (thin) solid segments. This is the case of the more extensive shifting assumption, without adjustment and it is a picture of the information in column 2 of Table III (page 9). As compared to the reference case, the "U" shape remains, but the upper left-hand corner (bracket #1) is quite a bit higher (i.e. the average overall tax rate for bracket #1 is higher here at 23%) and the upper right-hand corner (bracket #11) is much lower (and at 16% lies below #1).[5] Relative to the reference case, the "U" has shifted up (although non uniformly) to higher rates for all brackets (the bottom of the "U" is near 12%) except for #11.

Generally speaking, the change from the reference case is as expected. This is because the replacement of the conservative shifting assumption, by an assumption of more extensive tax shifting (forward), means that larger amounts of tax enter our calculations

on the basis of use of income and smaller amounts are assigned on the basis of source of income. Because of the nature of expenditure patterns, the source distribution of income, and the tax structure, this change in shifting assumption has produced lower average overall tax rates for the highest income bracket and higher rates for the other brackets.[6]

C. Conservative Shifting Assumption, With Adjustment (Deductibility and Export)

Now refer to the line of dash-dot (-.-.) segments. This is the case of the conservative shifting assumption, with the adjustment (see column 2, Table II)(page 8). Again, relative to the reference case, the "U" shape remains, but the whole curve has shifted down and lies at a lower rate level (but this shift is not of uniform magnitude for all brackets).[7] This change is due to the nature of the adjustment, namely an allowance for tax deductibility and export. The adjustment has a more pronounced effect on higher income brackets because of the progressivity of the federal income taxes and the positive relation between income size and the proportion of non-wage income (in connection with exported business taxes).[8]

D. Extensive Shifting Assumption, With Adjustment (Deductibility and Export)

Finally, refer to the line of dashed (---) segments. In this case, the adjustment and the more extensive shifting assumption are combined (see column 2, Table IV)(page 10). The shape of the pattern resembles a "U", but there are noticeable differences from the reference case. The left-hand extreme (i.e., the rate for bracket #1) is higher here at 22%. Also, the positions of bracket numbers 10 and 11 have fallen and reversed at 13% and 11% respectively. Bracket #5 (at 12%) lies between the 2, 3, 4 group and the 6, 7, 8, 9 group, and is at a higher rate than in the reference case.[9] The explanation for these results is a combination of the reasons mentioned in the previous pair of cases.

In this section we have made 3 individual comparisons of the reference case with each of our three other cases. The reader may wish to make other comparisons from Graph 1-b. Further comparisons may be made (and indeed are made, but without Graphs, in Chapter 4) from the data in Tables I through IV (columns 4 through 6 in each Table)(pages 7 thru 10).

II. COMPONENT TAXES

Now similar sets of Graphs may be examined for several of the major (in terms of proportion of total Hawaii state and local revenue produced) component taxes. Again the Graphs relate average tax rates (on the vertical axis) to income (A.G.I.) brackets (on the horizontal). Also, all definitions are the same as in the previous set, except that tax refers only to the particular component tax (e.g., the General Excise instead of overall total Hawaii state and local taxes). Our remarks in this section will note similarities and dissimilarities in the pattern of estimates for each case, for each component tax, as compared to the overall tax structure.

A. General Excise Tax

Since the General Excise accounted (in 1960) for about 40% of the total, it will be considered first. Graphs 2-a and 2-b depict the information found in Chapter 5, Table V, columns 1 - 4.

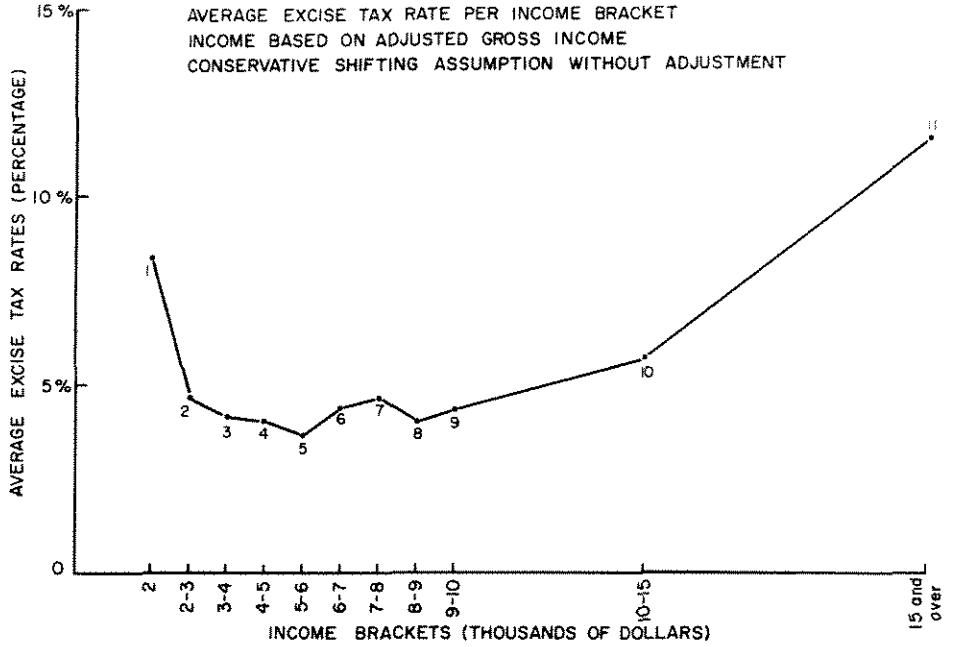
1. Reference case

Graph 2-a portrays the reference case (conservative shifting assumption, without adjustment) and has a rather "U" shape. The right-hand extremity lies well above the left (i.e., bracket #11 at 12% has a noticeably larger rate than bracket #1 at 9%). The brackets from $2,000 through $9,999 form a more or less flat bottom at about 4%; the rate is relatively low and invariant (i.e., indicates a proportional rate structure). Bracket #10 lies slightly up the incline of the right arm (at 6%), but well below bracket #1, the left-hand end point (at 9%). This pattern of rates is similar to the results for the tax structure as a whole. The remarks made on page 30 regarding the significance of and reason for the pattern apply here also. Further discussion appears in Chapter 6. So much for this, the reference case. Now, for some comparisons, refer to Graph 2-b. The line of heavy solid segments repeats the reference case from Graph 2-a.

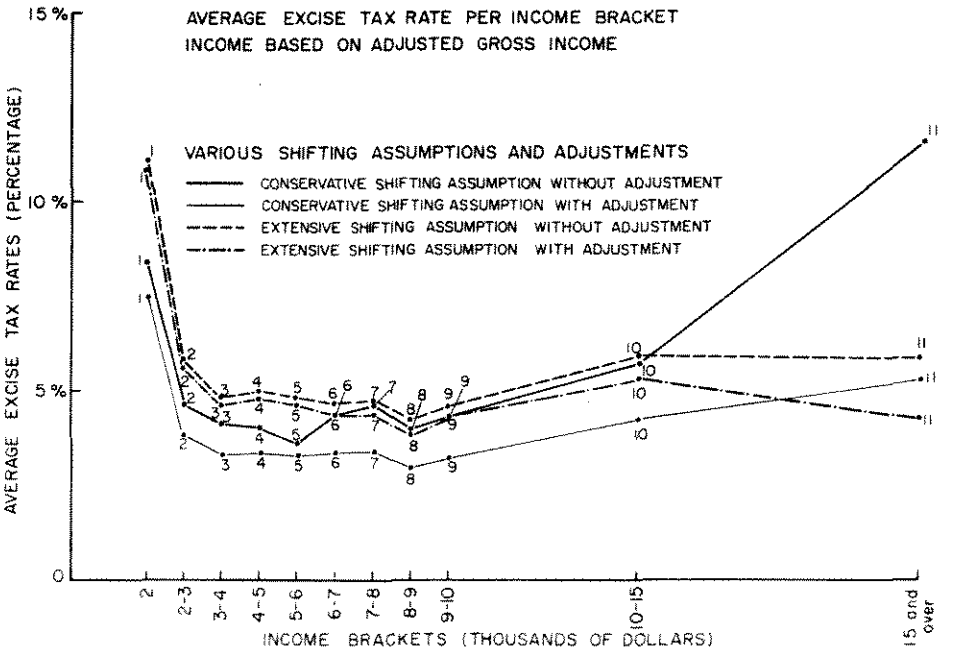
2. Extensive shifting assumption, no adjustment (neither deductibility nor export)

The line of dashed (---) segments represents the case of the more extensive shifting assumption without the adjustment. The "U" shape shows significant modification.[10] There really is not much of

GRAPH 2-a



GRAPH 2-b



a right-hand arm to this horseshoe. Bracket numbers 2, 10, and 11 lie slightly above the floor (at 5%), and bracket #1 (at 11%) is perched high above all. It is notable that this arrangement (and change from the reference case) is similar to what was found for the overall total tax structure, and the remarks in connection with the significance and underlying reasons for those results apply here too.

3. Conservative shifting assumption, with adjustment (deductibility and export)

The line of light solid segments represents the case where the adjustment is considered under the conservative shifting assumption. Here the entire curve shifts down (relative to the reference case). Bracket numbers 2 through 9 make up the floor (at 3%), and numbers 10 (at 4%) and 11 (at 5%) lie along the slightly inclined right arm. Bracket #1 is located at the left-hand extremity with the highest rate of all (7%). These observations are quite similar to those of the analogous case for the tax structure as a whole (see the remarks there regarding reasons for and significance of the results).

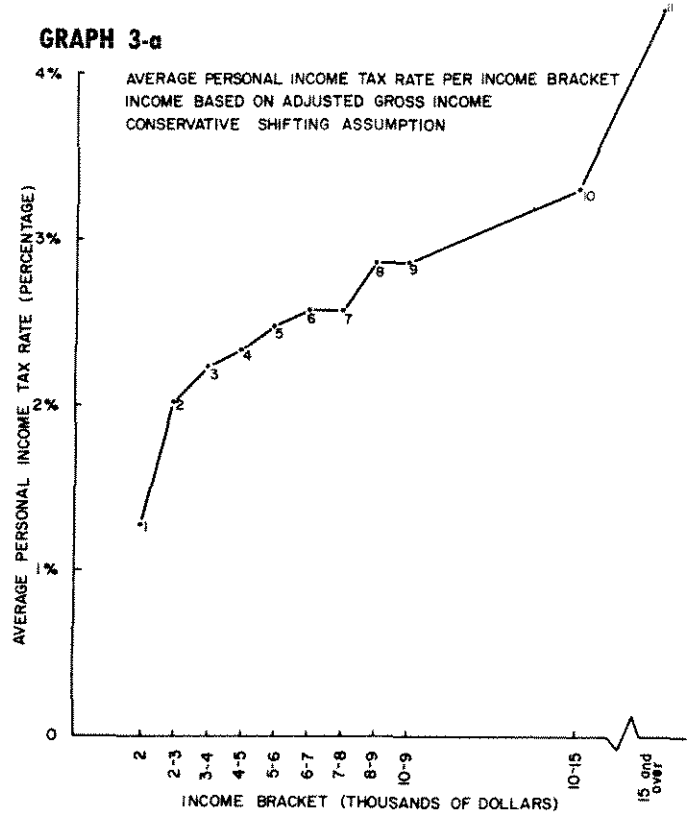
4. Extensive shifting assumption, with adjustment (deductibility and export)

The line of dash-dot (-.-.) segments represents the case where the adjustment and the extensive shifting assumption are combined. The main effect (compared to the reference case) is to collapse the right arm of the horseshoe (i.e., to decrease the rate for bracket #11 to 4%).[11] The main difference between this and the case of the conservative assumption with the adjustment is the lower rate position of bracket #11. Again, these results are similar to what was found with respect to the tax structure as a whole.

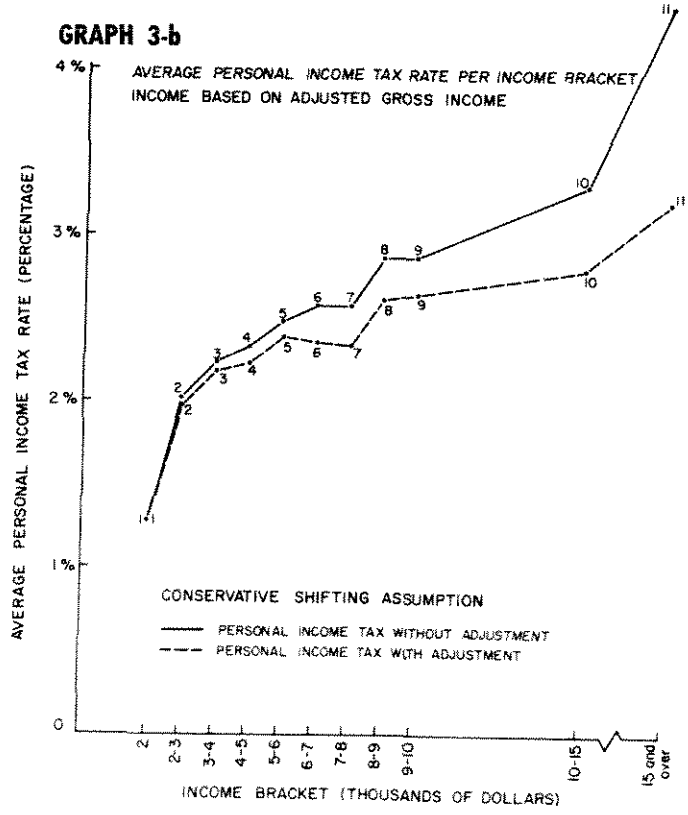
B. Personal Income Tax

1. The personal income tax represented about 20% of total Hawaii state and local taxes in 1960, and was dealt with under the fixed assumption of no shifting. Graphs 3-a and 3-b depict the information found in Chapter 5, Table V, columns 5 and 6. Graph 3-a shows the reference case. Here bracket numbers 2 through 10 lay in order along a rather straight[12] positively sloped line which ranges from 2% to 3¼%. This picture indicates the progressiveness of the effective rate structure, a feature which is even more extreme at both the lowest and highest income brackets.[13] With the fixed assumption of no shifting, only the consideration of the adjustment

GRAPH 3-a



GRAPH 3-b



for tax deductibility and export provides an instance for comparison with the base case.

2. Graph 3-b indicates that recognition of this adjustment results in only a slight rate reduction (from the reference case) for the lower income brackets (say, up through $4,999). However, for the higher brackets a rate reduction occurs which is both noticeable and increasing with income. The main reason for this pattern change is, again, the progressivity of the federal personal income tax. Note also the minor breaks in the upward slope of the line, which indicate lapses in progression.

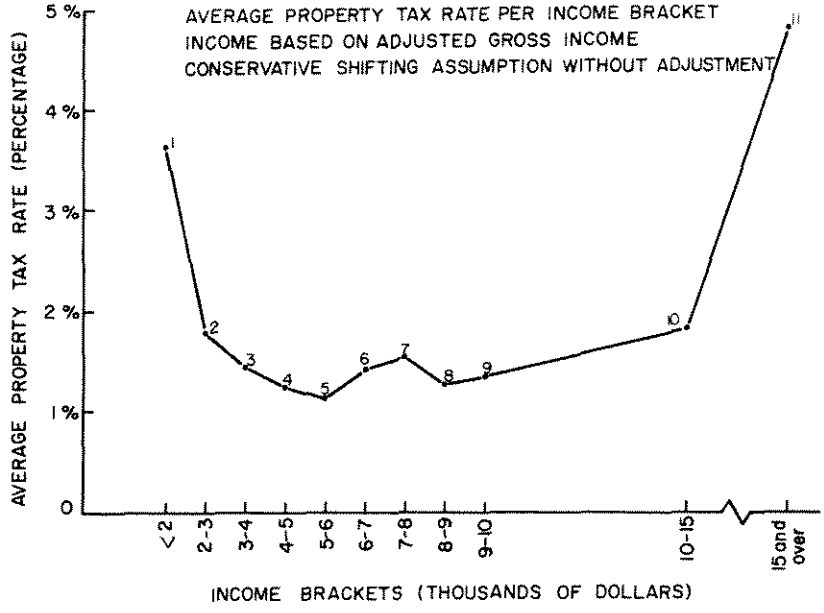
C. Property Tax

Next, the property tax will be examined. This component represented (in 1960) about 14 per cent of total taxes. Graphs 4-a and 4-b depict the information found in Chapter 5, Table V, columns 7 - 10.

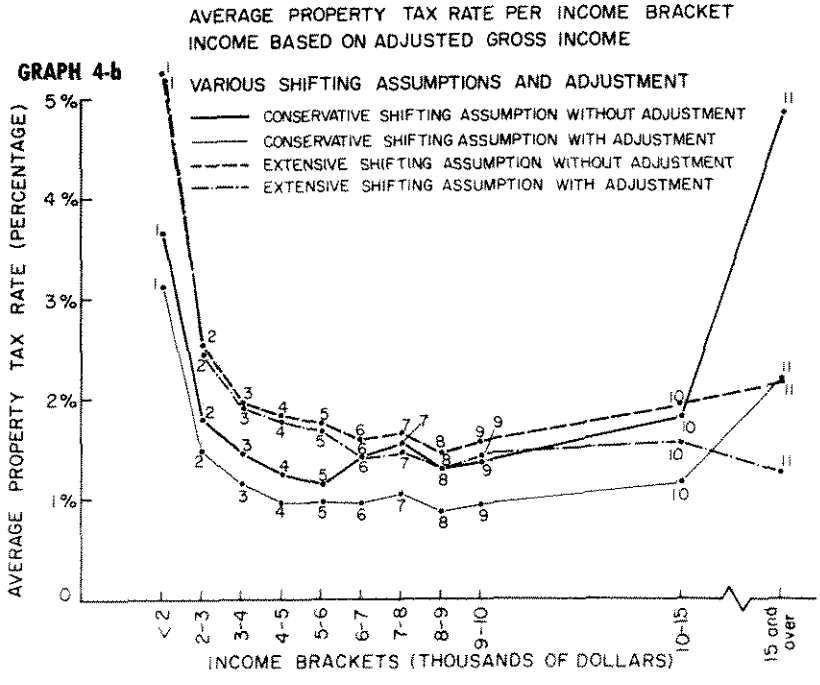
1. Graph 4-a shows the reference case. Again the picture is a sort of "U" shape. The upper right-hand extremity is higher than the left (i.e., bracket numbers 11 and 1 at 5% and 4% respectively, bear the highest and next-to-highest property tax rate assignments). Bracket numbers 2 and 10 lie slightly up the left and right arms respectively (at 2%), and the other brackets pretty much settle along the floor (at 1%) with relatively low and invariant rates. The floor has a bit of a downward-to-the-right slope which indicates lower rates are associated with higher income brackets in this range (i.e., a slight departure from a proportional rate structure). The reasons which underlie this pattern of estimates are not adequately stated in brief terms so the interested reader is referred to Chapter 6. There we indicate the several classes of property involved and the considerations relevant to the calculation of particular shares of the total property tax.

2. Now refer to Graph 4-b. The line of dashed (---) segments represents the case of the extensive shifting assumption, without adjustment. Here, compared to the reference case, the floor shifts up to higher rates (at 2%) for bracket numbers 3 through 9 (but maintains the slightly negative slope).[14] The pair of lowest income brackets (#1 and #2) bear the highest property tax rate assignments (at 5% and 3% respectively). This is understandable because the lower income groups are more likely to be tenants than landlords and to be more affected by the impact on use rather than source of income

GRAPH 4-a



GRAPH 4-b



(the opposite is suggested for the higher income brackets), and therefore the change in shifting assumption results in higher tax rate estimates.

3. The line of light solid segments depicts the case of the conservative shifting assumption, with adjustment for tax deductibility and export. In comparison to the reference case, here the whole curve shifts down to lower rates fairly uniformly, except for bracket #11 which moves to a lower rate level (at 2%) than that of bracket #1 (at 3%), but these two remain with the highest rates.

4. The line of dash-dot (-.-.) segments represents the case where the adjustment is combined with the extensive shifting assumption. Here the comments which compared the reference to the extensive case without the adjustment are again generally appropriate. However, bracket numbers 10 and 11 are shifted down to even lower rate levels (at 1½% and 1¼%) when the adjustment is introduced and in fact bracket #11 here is assigned the lowest rate of all.

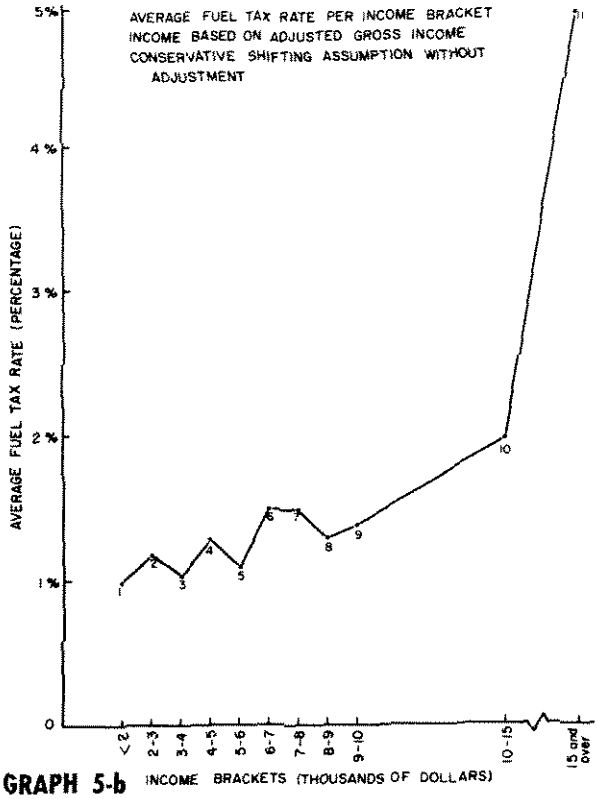
D. Fuel Tax

The last component to be examined here is the fuel tax, which represented about 12 per cent of total taxes (in 1960). Graphs 5-a and 5-b depict the information found in Chapter 5, Table V, columns 11 - 14.

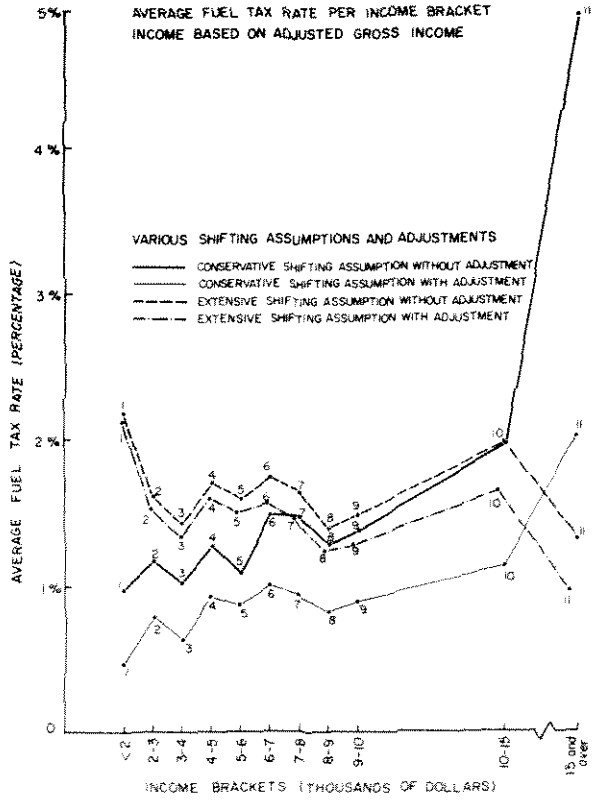
1. Graph 5-a represents the reference case. The picture shows a gently upward slope to the right (from 1% to 1-1/3%) for the brackets through to incomes less than $10,000, but this evidence of progression is not as pronounced as in the personal income tax case. Bracket numbers 10 (at 2%) and 11 show the highest rate assignments with the rate for #11 (at 5%) being substantially removed from the others. Briefly, the reasons behind this pattern involve a positive relation between income and proportion of income spent on fuel consumption (autos, boats, planes) and a positive relation between income and the proportional source of income from fuel sales. This becomes apparent as the effect of the application of the adjustment and the change in shifting assumption is noted. Further detail on these underlying factors is found in Chapter 6.

2. Turning now to Graph 5-b, the line of heavy solid segments repeats the reference case. The line of light solid segments shows the case of the conservative shifting assumption, with the adjustment. The adjustment pulls all rates down, especially those of

GRAPH 5-a



GRAPH 5-b



bracket numbers 10 (at 1%) and 11 (at 2%), but the general shape of the arrangement is not changed very much from the reference case. But when the extensive shifting assumption is used, without the adjustment (see the line of dashed segments) the shape of the pattern changes considerably from the reference case.[15] And when the extensive shifting assumption and the adjustment are combined (see the line of dash-dot segments), the most noticeable effect is the lowering (from the previous case) of the rate levels of bracket numbers 8, 9, 10, and 11, especially the latter.

This ends the graphical presentation of our results. Readers interested in a more complete discussion of the material in Tables I through IV are referred to Chapter 4, and to Chapter 5 regarding the component taxes.

Chapter 4

DISCUSSION OF ALTERNATIVE ESTIMATES (OVERALL TAX STRUCTURE)

This chapter deals mainly with the material covered in Chapter 3, Section I, but goes into more detail regarding the alternate sets of results and their comparison. The details presented in this (and the next) chapter may prove useful in estimating effects of proposed changes in the tax structure, especially in the absence of a set of precise functional relations (between income brackets and tax rates) for the various cases considered in Tables I - IV.

In Section I the estimates based on the A.G.I. concept are considered. In Section II the discussion goes on to consider the effect of a change to each of the three other income concepts (which were developed in Chapter 2).

I. RATES BASED ON A.G.I.

This section is divided into five parts. Parts A through D refer to Tables I through IV (which appear in Chapter 1), and a summary paragraph closes each part.[1] Part E presents some concluding remarks on this material.

A. Table I

1. Table I involves the conservative shifting assumption, without adjustment for tax deductibility or export. Here in column 2 the ratios of tax to income (the average effective tax rate estimates) are based on the adjusted gross income concept of income.[2] This is the reference case. Note that these numbers range from about 10% (in the $5,000 - $5,999 bracket) to about 29% (in the $15,000 and over bracket). The income group which pays the highest rate finds that these taxes account for about three times as large a portion of its income than for the income group which pays the lowest rate. Thus, based on this particular estimate, the combined Hawaii state and local tax structure is not a proportional one (with respect to income). A proportional tax structure would result in a column of equal numbers, announcing that each income group pays the same portion of its income to the Hawaii state and local tax collector.[3] Next, it is noted that these numbers do not move either from lowest to highest or from highest to lowest. A uniformly progressive tax

structure would exhibit the lowest to highest pattern, whereas the opposite case would be a regressive structure.

It is useful to rank the brackets based on the calculated tax/income ratio, with rank 1 assigned to the highest ratio and rank 11 to the lowest ratio. The ranks are entered to right of the ratios and a quick glance down the column shows that the pattern of rates does not move in a single direction. Besides the up and down pattern, the difference between pairs of ratios is worth consideration.[4] The smaller the difference, the closer is the rate structure to proportionality. Between ranks 1 and 2, the rate spread is about 12 percentage points, but between ranks 2 and 3, it is only about 2½ percentage points, and from ranks 3 to 11 inclusive, the rate spread is about 4 percentage points.

2. One feature of the rate structure which appears interesting is that the five income brackets between $5,000 and $9,999 occupy the last five ranks (7 through 11); i.e., these brackets pay the lowest rates. Within this group, the highest rate is about 11.4% and the lowest is about 10%, a rather small range which suggests an almost proportional overall rate structure over this set of income brackets. This group bears the assignment of about 30% of total taxes, and accounts for about 42% of the income.[5]

3. Overall (all income brackets taken together) the tax/income ratio works out to be about 14.8% and this is quite close to 14.4% rate obtained for the $10,000 to $14,999 bracket.

Another aspect of the situation at the high end of the income scale is that the difference between the $9,000 to $9,999 and $10,000 to $14,999 brackets is about 3½ percentage points (14.4% - 11%). Data within the latter bracket is not available, but it may be that the range of "relative proportionality" extends even beyond the $9,000 bracket.[6] In any event, the pair of top income brackets accounts for about 33% of income (A.G.I.) and has about 48% of the tax assigned to it (on this basis). The 29% rate (rank number 1) attached to the top income bracket is about twice the rate on the 10 to 15 group (which ranks third on this basis). This "fact" is not very meaningful in interpreting the tax treatment of these adjacent brackets, however, because of (a) the aforementioned absence of data within the 10 to 15 bracket and (b) the open and nature of the top (15 and over) bracket.

4. The four brackets at the low end of the income scale (below $5,000) represent about 25% of the income and bear an assignment of about 22% of the tax. In this group the rates range from 17% (in the lowest income bracket, which ranks second only to the top income bracket on this basis) to about 11 - 12%, and the ranks run from 2 to 6, with the three brackets between $2,000 and $4,999 receiving fairly proportional treatment.

5. In summary of this set of calculations then, the group of five brackets with income of at least $5,000 and less than $10,000 are in a comparatively low rate situation vis-a-vis the groups at both the bottom and top of the income scale. In addition, it may be noted that these results resemble those of a similar study done for Wisconsin.[7]

B. Table II

Table II also employs the conservative shifting assumption, but involves consideration of the adjustment for tax deductibility and export. There are two main aspects to this feature. One, deductibility, is recognition of the fact that certain state and local taxes are deductible for federal personal and corporate income tax purposes. (See Appendix Tables 28, 30, 49 and 50.) The other, export, is the allowance for nonresident ownership of business enterprises which bear Hawaii state and local taxes.[8] (See Appendix Table 30.)

1. Let us examine the rates in Table II, column 3, and compare them with those in the reference case. First of all, here in Table II the total amount of tax to be dealt with is about $109 million which is about 65% of the $153 million involved in Table I. Thus the level of rates is lower (than in the reference case) over the entire range of income brackets. The overall rate is about 10.5% (about 2/3 of what was found above) and this is bounded by rates attached to the next-to-the-bottom and the next-to-the-top income brackets which rank fifth and fourth, respectively. The rates range from a low of about 8% (for the bracket $8,000 to $8,999) to a high of about 14.5% (for the bottom bracket of under $2,000 income), and so here the ratio of highest rate to lowest rate has dropped to less than 2 to 1.[9]

2. Only two brackets have ranks the same as in the reference case: 5 and 6, but the only case of an order shift of more than two

ranks is the four place move of the bracket $5,000 to $5,999, and so it seems that the overall rearrangement (resulting from use of the adjustment) is not major.[10] Again the last five ranks are assigned to the group of brackets in the $5,000 to $9,999 range, and the spread of rates is barely more than 1%, indicating a rather proportional structure for this part of the territory. The proportion of total tax which is assigned to this middle set of brackets has increased to about 34½% of the total, but is still short of their 42% share of the income.[11]

3. In summary of this set of calculations, then, it appears that the situation is rather similar to what was found in Table I. However, a comparison of the two sets of circumstances reveals that the pair of highest income brackets have lower rates under the second set of calculations (this is particularly true for the top bracket) than under the first set. This occurs at the expense of both the group of brackets at the low end of the income scale and the group of brackets in middle range between $5,000 and $10,000. However, this middle income group maintains the lowest rate.

The nature of the difference of the basis for the tax rate calculations here (vis-a-vis the reference case) suggests the reasons for the difference in the resultant pattern of rates. For one thing, the adjustment for the federal income tax deductibility of Hawaii state and local taxes paid has a non-uniform effect upon the several income brackets because of the progressivity of the federal personal income tax. A dollar of tax paid to the state represents a larger subtraction from the federal personal income liability for a higher income bracket than for a lower bracket. Furthermore, the higher income brackets receive larger proportions of income in the form corporate dividend distribution and therefore have assigned to them larger shares of taxes which have been imposed on corporations and not shifted from corporations. Two aspects of adjustment appear here. One is the relief afforded by the federal corporate income tax. The other is recognition of nonresident ownership of corporations which pay Hawaii state and local tax. Thus, for these reasons, the set of calculations presently under discussion describe a situation in which the higher income brackets, in particular, experience lower rates (than in the reference case).

C. Table III

Table III does not include the adjustment for the tax deductibility and export, but it does involve the assumption of rather

extensive forward shifting of taxes paid by businesses.[12]

When the conservative shifting assumption is replaced by an assumption of more extensive forward shifting[13] of taxes, larger amounts of tax enter our calculations on the basis of use of income and smaller amounts are assigned on the basis of source of income.[14] Data regarding expenditure pattern (income use) indicates that lower income brackets spend larger proportions of their income on taxable items than do higher income brackets.[15] Data regarding the source distribution of income indicates that higher income brackets receive larger proportions of income from nonwage sources (such as profits, rentals, etc.) than do lower income brackets. Thus the change in shifting assumption results in larger amounts of tax being "removed from" the higher relative to the lower income brackets (on the income source side) and smaller amounts of tax being "placed upon" the higher relative to the lower income brackets (on the income use side). Therefore, the change in shifting assumption results in relatively higher tax rate estimates for the lower income brackets as compared to the higher brackets.

1. First of all, it is noted that the total tax to be assigned to the several income brackets is about $145 million. This is about 95% of the amount dealt with in Table I. The reason for the difference is that the pattern of tax shifting employed in Table III allows for a larger degree of tax exportation (for example via visitor sales, as distinguished from the explicit adjustment discussed above) and thus a lower estimate of the total amount of Hawaii state and local tax assigned to resident income recipients. From this it is understandable that the overall tax/income ratio of about 14% (which lies midway between the rates for ranks 5 and 6) is lower (by about 3/4 of a percentage point) than that for the reference case.

However, there certainly is not a uniform decline in the rate assignments for each income bracket. In fact, for every bracket except the top income, the situation in Table III is one of higher rates than what was found in Table I. The most notable change is that the top income bracket's rate is cut nearly in half, down to about 16%, which is however high enough to rank number 2. The lowest income bracket here ranks number 1, with a 23% rate, having undergone the second largest rate change, an <u>increase</u> of about 5 percentage points. Beside the rank switch between the top and bottom brackets, the only other such reshuffling occurs among the brackets in the $5,000 to $9,999 range, with only one instance of a jump of

more than one slot. The range of rates runs from about 23% to about 11%, considerably less than the range in Table I. The major part of this "narrowing" occurs mainly between ranks 1 and 2. Note that in the reference case, the top income bracket has rank 1, and rank 2 went to the lowest income bracket. These rank assignments were reversed in both Table II (conservative shifting assumption, with adjustment) and in Table III (extensive shifting assumption, without adjustment). However, in Table II this reversal occurred with a decrease in the lowest bracket rate, but in Table III the lowest bracket rate was substantially increased. Thus we see an important dissimilarity between the effect of introducing the adjustment as compared to the extensive shifting assumption.

2. The location of the last five ranks in the $5,000 to $9,900 range of income brackets occurs again. Furthermore, there is a spread of only about 1½ percentage points in the rates here, again indicating a fairly proportional area.[16] This group of brackets has 35% of the total tax assigned to it here, 5 percentage points more than in the reference case, but still less than its 42% of A.G.I.

3. The top two income brackets occupy ranks 2 and 3, with a spread of about 1 percentage point between their rates. This is in marked contrast to 14 percentage point spread and 2 to 1 ratio of rates found in Table I. The more extensive tax shifting assumption has closed this gap, to even a greater degree than that which results from the adjustment for tax deductibility and export. As a group, this pair of top income brackets has about 36% of the total tax assigned to it, about 11 percentage points less than in the reference case, but still in excess of its 33% of total A.G.I.[17]

4. The group of 4 lowest income brackets occupy rank 1 and 4 through 6, with a rate spread of about 9 percentage points overall but only about 1 point between ranks 4 and 6. The rate assignment of the bottom income bracket (almost 23%) is about 6 percentage points above that of the next to the bottom income bracket (ranked number 5), and about 7 points above the rate ranked number 2 (the top income bracket). Thus the perhaps most notable features of the results of the calculations here in Table III are the outstanding position of the income bracket with the highest rate, and the fact that this is the lowest income bracket.[18]

5. It should be clear that the pair of changes in the basis for calculation (the shifting assumption on the one hand, and the adjustment on the other) are not of the same general nature. Use of the

extensive shifting assumption results in the top income bracket experiencing a rate decline at the non-uniform expense of all other brackets each of whose tax assignments is larger than in the reference case, but not by the same amount (or proportion). The rather regressive nature of the effect of the extensive shifting assumption shows up in the comparison of the rates for a given income bracket under the two shifting cases. Subtracting the rate in III from the rate in I, for each income bracket, provides a set of differences which, as has been mentioned, are negative (Table III rate higher than Table I rate) except in the instance of the highest income bracket. On the other hand, the adjustment results in rates which for all brackets are lower (than under the original basis) but, again, in differing amounts, with the major adjustment occurring in the top bracket.

6. To briefly summarize this set of tax/income calculations, it is noted that the major dissimilarity between these results and those in Table I appears with respect to the situation of the highest and lowest income brackets. Also, the break between, with a relatively proportional structure within, the pair of groups of brackets with incomes between $2,000 to $4,999 and $5,000 to $9,999, appears to hold up even though all rates for these brackets are higher here in Table III. Finally, the $5,000 to $9,999 group maintains its position as the set of brackets with the lowest rates.

D. Table IV

So far, three sets of tax/income ratios have been reviewed. Each set contains eleven rates (one for each income bracket) and for each case the same income concept (A.G.I.) has been employed. Table IV shows the results of employing both the more extensive tax shifting assumption and the adjustment.

1. The total amount of tax involved here in IV is about $128 million, about 84% of the amount in Table I. The overall (all income brackets) tax/income ratio works out to about 12.4% and is quite close to the rate with rank 6, which is assigned to the income bracket $5,000 to $5,999.[19] However, the lower (compared to the reference case) overall rate is not accompanied by lower rates assigned to all income brackets. In fact, the rates assigned to all the income brackets up through $5,999 are higher here than in the reference case, while the rates for all other brackets ($6,000 and above) are lower.

2. An outstanding feature of these results is that the top income bracket is assigned a rate of about 11% and ranks number 7. Thus, whereas the separate use of the adjustment and of the more extensive shifting assumptions move the top income bracket from rank 1 down to rank 2, the combination of these two situates the top bracket with a rate rather below the average. The highest rate, 22%, is assigned to the lowest income bracket. Thus not only does the lowest income bracket have the highest rate, but that rate is twice as high as for the top income bracket and more than twice as high as for the top income bracket and more than twice as high as for the bracket with rank 11 ($8,000 to $8,999). Furthermore, the difference between ranks 2 and 11 is 4 points. And so in this set of calculations, as in those of Table III, the degree to which the bottom income bracket, rank 1, stands apart from the others is a rather notable result.

3. The group of 5 brackets with income in the $5,000 to $9,999 range bears the assignment, for this set of calculations, of 37% of total tax, about 7 percentage points more than in the reference case, but still less than the group's 42% share of total income. When only the 4 brackets in the $6,000 to $9,999 range are considered, the tax share (for this set of calculations) is 28%, compared to a 33⅓% income share.[20] Thus when the $5,000 to $5,999 bracket is eliminated from the group, the ratio of tax share/income share for the group falls from 88% to 83%.[21]

4. The group of 4 lowest income brackets bears the assignment of about 31% of the total tax, about 9 percentage points higher than in the reference case. This group represents about 25% of the total A.G.I. However, the bottom income bracket alone represents about 3.8% of the total A.G.I., and bears the assignment here of about 6.2% of the total tax, and about 4.4% of the total tax in the reference case. The following calculations of the ratios of tax share/income share[22] helps to indicate the extent to which the bottom income bracket leads the next three income brackets with regard to this disproportionality (of tax share to income share).

	This Case (IV)	Reference Case (I)
Group of 4 lowest income brackets	121%	87%
Bottom income bracket	163%	116%
Group of next 3 income brackets ($2,000 to $4,999)	114%	82%

The foursome occupies ranks 1 through 3 and 5, but the rate difference between ranks 4 and 5 is negligible, and so here in these Table IV calculations, the four lowest income brackets are situated among the highest rates. This is understandable as we have noted that both the extensive shifting assumption and the adjustment serve to move these brackets toward the higher rate ranks.

5. The pair of highest income brackets here are assigned about 32% of the total tax, which is about 16 points less than in the reference case and, in contrast to the 3 other sets of calculations, 1 point less than the group's 33% share of A.G.I. Also, note that for the first time the rate for the $10,000 to $14,999 bracket is higher than for the top bracket.

6. To briefly summarize the results in Table IV, note:

(1) the relatively high rate for the bottom income bracket;

(2) the lowered rate position for the top income bracket;

(3) the maintenance of the lowest rate situation by the middle income group.

E. Conclusion

The four sets of tax/income ratio calculations presented in Tables I through IV appear to yield a somewhat similar pattern of results. In general, the middle group of brackets ($5,000 to $9,999) has the lowest rate assignments compared to the brackets below and above this group. In addition, the five brackets within this group have rate assignments which are rather equal. Also, the relatively high rate assignment to the bottom income bracket occurs throughout the four sets of calculations. Also, generally speaking, this rate is outstanding in the two senses that there is a rather substantial difference between the bottom income bracket rate and (a) the next highest rate, and (b) the rates assigned to the other income brackets at the low end of the income scale.

To conclude this discussion of the rates based upon A.G.I. we look at a pair of ways to summarize the effect of changing the shifting assumption and/or introducing the adjustment.

HAWAII TAX RATE DISTRIBUTION ESTIMATES

First we examine the pattern of rank shifts. The following table shows the instances of rank shifts of 2 ranks or more. Note that an increase in rank (e.g., from rank 11 to rank 7) refers to movement from a lower estimated tax rate to a higher estimated tax rate.

RANK SHIFTING FOR A.G.I.
(Comparing Column 2 of Tables I thru IV)

Decrease in Rate Rank				Increase in Rate Rank		
Table	Income Bracket	From	To	Income Bracket	From	To
I to II	$6,000 - $6,999	8	10	$5,000 - $5,999	11	7
	$7,000 - $7,999	7	9			
I to III				$5,000 - $5,999	11	7
I to IV	$7,000 - $7,999	7	9	$2,000 - $2,999	5	3
				$4,000 - $4,999	4	2
	$15,000 and over	1	7	$5,000 - $5,999	11	6

Next we examine rate structure change that is the pattern of rate changes which results from a change in the basis of calculation. For example, look at column 2 in Tables I and II and consider the first bracket. The rate in Table I is 17.11, the rate in Table II is 14.50, and the difference (column 2 Table I rate minus column 2 Table II rate) is 2.61. This difference will be referred to as the absolute change. The absolute change divided by the Table I rate will be referred to as the percentage change (2.61/17.11 = 15.2%). Similarly, the absolute change and the percentage change can be calculated for the overall total (these turn out to be, for column 2 of Table I compared to column 2 of Table II, 4.28 and 28.9%). The absolute change for the first bracket may be expressed as a ratio to

the absolute change for the overall total (e.g., 2.61/4.28 = .61). A similar ratio may be constructed for the percentage change (e.g., 15.2/28.9 = .53) and this ratio will be referred to as the relative percentage change.[23] Similar calculations may be made for each of the other ten brackets. The same sort of calculations may be made regarding the rates in column 2 of Tables III, and IV also.

The results for the relative percentage change figures are shown in the table below.

RELATIVE PERCENTAGE CHANGE[a/]

	(1)	(2)	(3)
Income Bracket	I vs. II	I vs. III[b/]	I vs. IV[b/]
Under $2,000	.53	6.23*	1.84*
2,000 - 2,999	.47	4.18*	1.08*
3,000 - 3,999	.51	3.08*	.71*
4,000 - 4,999	.40	3.36*	8.05*
5,000 - 5,999	.27	4.78*	1.33*
6,000 - 6,999	.75	1.48*	.10
7,000 - 7,999	.84	.94*	.34
8,000 - 8,999	.77	1.18*	.22
9,000 - 9,999	.75	1.24*	.14
10,000 -14,999	.88	.66*	.59
15,000 and over	1.77	8.40	3.79

a/ See Appendix Table 56.
b/ The * means that the underlying difference is of opposite sign compared to the average and the other entries in the column.

Use column 1 as an example. All the entries except the last are less than 1. A number greater than 1 indicates that under the conservative shifting assumption, the change from "without the adjustment" to "with the adjustment" has a greater effect (in terms of relative percentage change) on the tax rate for the income bracket than on the rate for the overall total (i.e., over all income brackets). Similarly, an entry which is less than 1 indicates a less than average effect. In column 1, the effect for each bracket and for the average is in the same direction, and all underlying changes are positive (that is, for each bracket, the rate calculated without the adjustment is higher than the rate with the adjustment). Only the top income bracket has an entry greater 1, and this bracket may be designated as "G" to signify that its rate fell more than the average did as a result of the application of the adjustment, and the other brackets are designated as "L".[24]

The same brackets appear as "L" in column 2, where the comparison is between the conservative and the extensive shifting assumptions, both without the adjustment. In this case, however, except for the top income bracket and the overall average, all of the underlying changes are negative (that is, for each bracket, except the $15,000 and over, the rate calculated for the extensive shifting assumption exceeds the rate for the conservative assumption.

In the sense that the direction of the effect is not the same for all brackets, the effect of the change in shifting assumptions may be considered more severe than the "without the adjustment" --- "with the adjustment" case. Furthermore, a difference between the two cases may be noted with respect to the inter-bracket distribution of the effect on the members of the "L" group. In column 2, there is a positive relation between the magnitude of the effect and the absolute size of the number in the entry, whereas, in column 1, this relation is negative. Keeping this in mind, we note that there is a difference between the two cases, with respect to the relative magnitude of each effect on a given income bracket. The bottom income bracket, for example, is effected to a relatively greater degree by the change in shifting assumption than by the application of the adjustment, whereas the opposite is true for the $7,000 - $7,999 bracket.

The entries in column 3 show the effect of the change from the conservative shifting assumption without the adjustment to the extensive shifting assumption with the adjustment. Once again the only member of the "G" set is the top income bracket. The five

income brackets between $6,000 and $14,999 show changes in the same direction as the top bracket, but these changes, which are positive, are all less than the overall average, and so these five brackets are again members of the "L" set. The other members of the "L" set, the five brackets of less than $6,000 income, each shows an underlying change which is negative, and therefore opposite in direction to the average.

II. RATES BASED ON OTHER INCOME CONCEPTS

The foregoing comparison of the tax rate structure under the different shifting assumptions, with and without adjustment, has been based on rates relative to A.G.I. A similarly detailed comparison of rates based on the several other income concepts will not be discussed here. However, it is possible to see the effect on the rate structure due to a change in the income concept from a somewhat more summary view. To do this we first examine the pattern of rank shifts brought about by a change in income concept. Then we examine by brackets, the ratio of the bracket rate change relative to the weighted average rate change, and this is done for changes in both absolute and percentage terms.

A. Rank Shifting

We may begin by looking at the effect of deducting federal taxes paid from income. This is done for A.G.I. by comparing ranks in columns 2 and 3 (for a given table, I through IV), and for "Broadened Income" by comparing ranks in columns 4 and 5 (again, for each table).

In Table I a comparison of the ranks in columns 2 and 3 shows very little rank shift. Columns 4 and 5 show no rank shift. In both cases the average rate moves slightly from rank 3 to between ranks 2 and 3. So in Table I there seems to be very little rank difference between rates based on income versus income after federal tax.

The same conclusion holds for Table II. Here the only shift of more than 2 ranks occurs in the top bracket between columns 4 and 5 (a shift from 4 to 1), and there is very little rank shift in the average rate. Similarly in Table III the largest shift is that

of the top bracket between columns 4 and 5 (from rank 5 to 3). And again in Table IV there is a similar result (top bracket shifts between columns 4 and 5 from rank 11 to 7). Thus we conclude that there is not much effect on the pattern of ranks due to a change from income to income after federal tax, whether we use A.G.I. or "Broadened Income", and this holds for both shifting assumptions, with and without the adjustment.

The effect of the change from A.G.I. to "Broadened Income" is somewhat more complex. The table on the next page (page 57) shows the instances of rank shifts of 2 ranks or more.

To account for both shifting assumptions, with and without adjustment, the results for each of Tables I through IV are shown. The case of no deduction for federal tax involves comparison of columns 2 and 4 (for each Table I - IV) and comparison of columns 3 and 5 (Tables I - IV) shows the case for income after federal tax.

The "Decrease" columns refer to a move from a lower numbered rank (higher rate) to a higher numbered rank (lower rate), and the opposite holds for the "Increase" columns. The indication here is that the $2,000 - $2,999 bracket experiences a decrease in all 8 cases and by at least 6 ranks in each case. The only other brackets which show a decrease in more than one case are the top income bracket (3 cases) and the $3,000 - $3,999 (2 cases). The brackets $9,000 - $9,999 and $5,000 - $5,999 experience an increase in 7 and 6 cases respectively. The brackets $6,000 - $6,999, $7,000 - $7,999, $8,000 - $8,999, and $10,000 - $14,999 increase in 2 cases each. Except for the $9,000 - $9,999 bracket, most of these "increase" cases involve just a 2 rank shift. So generally speaking, with respect to ranks, a change from A.G.I. to "Broadened Income" mainly moves the $2,000 - $2,999 bracket to lower ranks and moves the brackets $9,000 - $9,999 and $5,000 - $5,999 to higher ranks.

B. Rate Structure Changes

1. Now we may examine the pattern of rate changes which results from a change in income concept. For example, look at Table I, and consider the first bracket. The rate in column 2 (A.G.I.) is 17.11, the rate in column 4 ("Broadened Income") is 12.27, and the difference (column 2 rate minus column 4 rate) is 4.84. This difference is the absolute change, and the absolute change divided by the column 2 rate is the percentage change (4.84/12.27 = 29.20%). The absolute change and the percentage change are calculated for the overall total

	Decrease in Rate Rank						Increase in Rate Rank					
	Columns 2 and 4			Columns 3 and 5			Columns 2 and 4			Columns 3 and 5		
	Bracket	Rank Shift From	To	Bracket	Rank Shift From	To	Bracket	Rank Shift From	To	Bracket	Rank Shift From	To
Table I							$ 7,000 - $ 7,999	7	5	$ 6,000 - $ 6,999	9	7
	$ 2,000 - $2,999	5	11	$2,000 - $2,999	5	11	$ 8,000 - $ 8,999	10	8	$ 7,000 - $ 7,999	7	5
	$ 3,000 - $3,999	6	9	$3,000 - $3,999	6	9	$ 9,000 - $ 9,999	9	6	$ 8,000 - $ 8,999	10	8
Table II							$ 5,000 - $ 5,999	7	5	$ 5,000 - $ 5,999	7	5
	$ 2,000 - $2,999	5	11	$2,000 - $2,999	5	11	$ 6,000 - $ 6,999	10	8	$ 9,000 - $ 9,999	8	6
	$15,000 and over	2	4				$10,000 - $14,999	4	2			
Table III	$ 2,000 - $2,999	5	11	$2,000 - $2,999	5	11	$ 5,000 - $ 5,999	7	4	$ 5,000 - $ 5,999	7	5
	$15,000 and over	2	5				$ 9,000 - $ 9,999	10	7	$ 9,000 - $ 9,999	10	6
Table IV	$ 2,000 - $2,999	3	9	$2,000 - $2,999	3	11	$ 5,000 - $ 5,999	6	4	$ 5,000 - $ 5,999	7	4
	$15,000 and over	7	11				$ 9,000 - $ 9,999	10	6	$ 9,000 - $ 9,999	10	6
										$10,000 - $14,999	4	2

(these turn out to be, for column 2 compared to column 4, 2.63 and 17.79%). The absolute change for each bracket may be expressed as a ratio to the absolute change for the overall total (e.g., 4.84/2.63 = 1.84). A similar ratio may be constructed for the percentage change, that is the relative percentage change, (e.g., 28.29/17.79 = 1.59). The same sort of calculations may be made regarding the rates in columns 2 and 4 of Tables II, III, and IV also. Finally, the same sort of calculations may be made to determine the effect of a change from A.G.I. to A.G.I. minus federal tax (use columns 2 and 3, from Tables I through IV) and from A.G.I. to "Broadened Income" minus federal tax (use columns 2 and 5, Tables I through IV).

2. The results for the relative percentage change figures are shown in the following tables.

RELATIVE PERCENTAGE CHANGE[a/]

	1	2	3	4
	A.G.I. vs. Broadened Income			
Brackets	(Table I)	(Table III)	(Table II)	(Table IV)
Under $ 2,000	1.59	1.73	1.60	1.72
$ 2,000 - $ 2,999	1.80	2.01	1.81	2.00
$ 3,000 - $ 3,999	1.09	1.18	1.09	1.17
$ 4,000 - $ 4,999	.80	.86	.81	.86
$ 5,000 - $ 5,999	.51	.56	.51	.56
$ 6,000 - $ 6,999	.63	.64	.63	.64
$ 7,000 - $ 7,999	.64	.63	.64	.63
$ 8,000 - $ 8,999	.46	.45	.47	.45
$ 9,000 - $ 9,999	.49	.48	.48	.47
$10,000 - $14,999	.54	.51	.54	.51
$15,000 and over	1.92	1.85	1.94	1.84

a/ See Appendix Table 57

b/ The * indicates that the underlying difference is of opposite sign compared to the average and the other entries in the column.

RELATIVE PERCENTAGE CHANGE (Continued)

	5	6	7	8
	A.G.I. vs. A.G.I. - Federal Tax			
Brackets	(Table I)	(Table III)	(Table II)	(Table IV)
Under $ 2,000	.96	1.15	.96	1.15
$ 2,000 - $ 2,999	.89	.93	.90	.93
$ 3,000 - $ 3,999	.86	.86	.85	.86
$ 4,000 - $ 4,999	.88	.89	.87	.89
$ 5,000 - $ 5,999	.80	.82	.80	.81
$ 6,000 - $ 6,999	.83	.83	.84	.83
$ 7,000 - $ 7,999	.85	.85	.85	.85
$ 8,000 - $ 8,999	.83	.82	.83	.82
$ 9,000 - $ 9,999	.84	.83	.84	.84
$10,000 - $14,999	1.05	1.07	1.05	1.07
$15,000 and over	1.70	1.59	1.70	1.60

	9	10	11	12
	A.G.I. vs. Broadened Income - Federal Tax[b]			
Brackets	(Table I)	(Table III)	(Table II)	(Table IV)
Under $ 2,000	1.61*	.63*	1.60*	.63*
$ 2,000 - $ 2,999	2.69*	1.64*	2.69*	1.63*
$ 3,000 - $ 3,999	.18*	.13	.19*	.13
$ 4,000 - $ 4,999	.80	.83	.79	.83
$ 5,000 - $ 5,999	1.32	1.19	1.31	1.19
$ 6,000 - $ 6,999	1.44	1.27	1.44	1.28
$ 7,000 - $ 7,999	1.51	1.33	1.52	1.35
$ 8,000 - $ 8,999	1.97	1.62	1.95	1.62
$ 9,000 - $ 9,999	1.90	1.58	1.90	1.59
$10,000 - $14,999	2.47	2.10	2.46	2.11
$15,000 and over	1.03	1.01	1.03	1.02

Note that for each bracket the entries in columns 1 and 3, 2 and 4, 5 and 7, 6 and 8, 9 and 11, and 10 and 12 are virtually identical (i.e., reading down column 1 shows about the same as reading down column 3, down column 2 is about the same as down column 4, etc.). The distinction between these pairs is that the first member (e.g., column 1) is based on rates without the adjustment, whereas the second member (e.g., column 3) has the adjustment. The simplicity indicates that the effect of a change in income concept is independent of whether the rates include the adjustment or not, so we may focus our attention on columns 1, 2, 5, 6, 9, and 10. Columns 1, 5, and 9 refer to Table I, while 2, 6, and 10 refer to Table III, and it is recalled that the distinction between these two tables is the shifting assumption. Columns 1 and 2 both deal with a change from A.G.I. to "Broadened Income". Columns 5 and 6 both refer to A.G.I. versus A.G.I. minus federal tax. Columns 9 and 10 both refer to A.G.I. versus "Broadened Income" minus federal tax. The details of the differences among these income concepts are discussed in Chapter 2. Bracket distributions for income after federal taxes paid are in Appendix Table 60.

3. Now use column 1 as an example. Some of the numbers in this column are greater than 1, others are less than 1. An entry greater than 1 indicates that a change from A.G.I. to "Broadened Income" has a greater effect on the tax rate for the bracket than on the rate for the overall total (i.e., over all brackets). Similarly, an entry which is less than 1 indicates a less than average effect. In column 1 (and also in columns 2, 5, and 6) the effect for each bracket and for the average is in the same direction. (This is not true for columns 10 and 12.) For column 1, all the underlying changes are positive (that is, for each bracket, the rate based on A.G.I. is higher than the rate based on "Broadened Income"). The brackets which show entries less than 1 are all between $4,000 and $14,999. These brackets may be designated as "L" to signify that their rates fell less than the average did under this income concept change, and the other brackets are designated as "G".[25]

The same brackets appear as "L" in column 2. Some brackets have higher numbers in column 2 than they do in column 1 (e.g., the first bracket, a "G", and the $5,000 - $5,999, an "L") and some have lower numbers (e.g., the highest income bracket, a "G", and the $8,000 - $8,999, an "L"). But the patterns in columns 1 and 2 are similar and so in general it seems that the rate structure change due to a change from A.G.I. to the "Broadened Income" concept is not much influenced by the choice of shifting assumption.

DISCUSSION OF ALTERNATIVE ESTIMATES
(OVERALL TAX STRUCTURE)

4. Now the effect of the change from A.G.I. to A.G.I. minus federal taxes paid may be considered by examining columns 5 and 6. The underlying figures show that here the differences are all negative (that is, the rates based on A.G.I. are all lower than the rates for A.G.I. minus federal taxes). Therefore those brackets with numbers less than 1 may be designated as "G" because their rates show a less than average % increase, and the other brackets are designated as "L". In column 5, all brackets except the pair of highest incomes fall into this category. In column 6, the bottom income bracket joins the previous pair of "L" (those brackets with numbers greater than 1, whose rates show a greater than average % increase due to the change in income concept). Except for the lowest and highest income brackets, the numbers in columns 5 and 6 are quite similar, and this indicates that, except at the income extremes, the rate structure change due to this change in income concept is not much influenced by the choice of shifting assumption. However, the bottom bracket fares rather differently[26] under the conservative shifting assumption than it does under the more extensive one, from the point of view of the effect which this change in income concept has on the % change in the bracket's tax rate compared to the average. This bracket is a "G" under the conservative and an "L" under the more extensive shifting assumption. The highest income bracket is an "L" under both assumptions, but to a lesser extent under the extensive than with the conservative shifting assumption. This is because of the effect which the choice of shifting assumption has on the estimates of the federal tax payments by brackets (a big item here is the excise tax component). The fact that the highest bracket shows up as an "L" is not surprising, given the importance and progressivity of federal income taxes.

5. Finally, the effect of the change from A.G.I. to "Broadened Income" minus federal taxes paid may be considered by examining columns 9 and 10. For column 9, the underlying differences are all negative except for the first three brackets (which bear asterisks). These brackets are designated as "G" because their tax rates decrease as a result of this change in income concept. The only other "G" is the $4,000 - $4,999 bracket (the entry is less than 1). Much the same is true in column 10 on this score, except that only the first 2 brackets have positive underlying differences. Again only the first 4 brackets are "G".

In comparing columns 9 and 10 to get an indication of whether the shifting assumption influences the effect of the change in income concept, the following is noted. The first two brackets show rather large differences (their change is lower under the more extensive shifting assumption, and this is because the impact of the assumption change is relatively stronger with respect to the federal income taxes deduction than with respect to the income broadening additions, for these brackets). The entries for the other brackets show much less inter-column variation, but column 9 entries are generally higher, the difference is small for the $3,000 to $3,999 bracket, and the difference gets larger over the range of brackets to $14,999, with the highest income bracket showing a small inter-column difference.

6. In summary, the following may be noted.

   (a) Lower income bracket (under $4,000) (1 - 3) rates are are relatively low under A.G.I., in the sense that they are among the "G" brackets (their rates increase more or decrease less than the average, in % terms) in <u>each</u> case of change in income concept considered here.

   (b) The pair of highest income brackets show a rather opposite pattern. With a single exception (the top income bracket in the change to Broadened Income) they are always among the "L" brackets. Thus their rates are relatively high under A.G.I. (in the same relative sense as indicated above). The group of middle income brackets are among the "G" brackets with the change to A.G.I. minus federal taxes, and among the "L" brackets in the other cases.

This ends the discussion of alternative rate estimates for the overall tax structure. The next chapter proceeds along similar lines and the four major component taxes are discussed individually.

Chapter 5

DISCUSSION OF ALTERNATIVE ESTIMATES (COMPONENT TAXES)

In this chapter, we continue to examine our estimates of effective tax rates, and attention is focused on several of the major[1] component taxes. The purpose of this chapter is to provide somewhat more detail than is found in Chapter 3, Section II (therefore, some readers may be satisfied with the coverage in Chapter 3 and choose to skip Chapter 5). The discussion involves only the estimates based on A.G.I. because our analysis (similar to that discussed in Chapter 4, Section II) indicates that the rate patterns are relatively insensitive to the choice of income concept.[2] In addition to comparisons of rates calculated under different assumptions, results for component taxes are compared with analogous calculations for the total tax structure, and similarities are noted. In the cases of the excise, property, and fuel taxes, the tax rate estimates were constructed by disaggregating each of these major component taxes into sub-components. Each sub-component was handled separately and therefore the factors which underlie the patterns of rate estimates are not adequately stated in brief terms. The interested reader is referred to Chapter 6.

I. GENERAL EXCISE TAX

Since the General Excise accounted (in 1960) for about 40 per cent of the total, it will be considered first. Refer to Table V, columns 1 to 4, which appears on the following page.

A.

For the reference case (conservative shifting assumption, without adjustment) the tax to income ratios (average effective tax rates) range from about 11½ per cent to about 3½ per cent. This is of interest since the maximum rate on any single transaction was 3½ per cent ad valorem.[3] The $15,000 and over bracket has the highest rate which is about three times the lowest rate (associated with the $5,000 to $5,999 bracket), and this result is nearly the same as was found with respect to the total tax structure. There is a spread of about 3 percentage points between ranks 1 and 2 (which turns out to be the under $2,000 bracket), and about 3 percentage

TABLE V

Effective Rates With Respect To A.G.I.

Excise Tax

Income Bracket	(1) Conservative Shifting Assumption without Adjustment		(2) Conservative Shifting Assumption with Adjustment		(3) Extensive Shifting Assumption without Adjustment		(4) Extensive Shifting Assumption with Adjustment	
	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank
Under $ 2,000	8.61	2	7.42	1	11.05	1	10.82	1
$ 2,000 - $ 2,999	4.62	4	3.92	4	5.82	3	5.62	2
$ 3,000 - $ 3,999	4.12	8	3.36	9	4.92	6	4.71	6
$ 4,000 - $ 4,999	4.03	9	3.41	6	5.00	5	4.80	4
$ 5,000 - $ 5,999	3.69	11	3.37	8	4.85	7	4.72	5
$ 6,000 - $ 6,999	4.41	6	3.39	7	4.73	9	4.40	7
$ 7,000 - $ 7,999	4.60	5	3.42	5	4.79	8	4.40	8
$ 8,000 - $ 8,999	4.00	10	3.01	11	4.27	11	3.93	11
$ 9,000 - $ 9,999	4.28	7	3.28	10	4.59	10	4.26	10
$10,000 - $14,999	5.70	3	4.23	3	5.94	2	5.39	3
$15,000 and over	11.53	1	5.24	2	5.80	4	4.27	9
Overall Total	5.76	3	3.96	4	5.41	4-5	4.90	4

points between ranks 2 and 3 (the $10,000 to $14,999 bracket). But between ranks 3 and 11, the spread is only 2 percentage points, and only 1 point between ranks 4 and 11, and this narrowing of the rate differential indicates a rather proportioned range. For all income brackets taken together, the rate is about 5.7 per cent, just about equal to that of the $10,000 to $14,999 bracket (which, as in the corresponding total tax calculation, is about 1/2 that of the highest income bracket).

The group of five brackets in the $5,000 to $9,999 range occupy ranks from 5 through 11, excluding 8 and 9 which are assigned to the $3,000 to $3,999 and $4,000 to $4,999 brackets respectively. Thus for the excise tax alone, the lowest rate situations are not solely the property of the middle income group.[4] Perhaps the picture can best be described as one of relative proportionality at a relatively low rate for the eight brackets from $2,000 to $9,999, a group which accounts for 46 per cent of the excise tax and 63 per cent of the income.[5]

B.

Examination of the calculations based on the extensive shifting assumption without adjustment indicates the following comparison (with the reference case):

1. very little change in the range of rates or the overall average rate;

2. little in the way of significant rank shift, except for the increase of the lowest income bracket to rank 1 (highest rate, 11%) and the decrease of highest income bracket to rank 4 with a 5.8% rate which is about average;

3. an increase (to 5 percentage points) in the difference between ranks 1 and 2, a decrease (to almost zero) between ranks 2 and 3, and further overall reduction in the difference between ranks 2 to 11 (to about 1½ percentage points), which indicates that the extensive shifting assumption moves the rate structure toward proportionality for all but the lowest income bracket;

4. the calculated assignments of the excise tax show the following proportions, by income brackets:

pair of highest:	36%	(decrease from 48%)
pair of lowest:	13%	(increase from 9%)
all others:	51%	(increase from 42%)
$5,000 to $9,999:	36%	(increase from 30%);

5. total excise tax assigned: $55.964 million (decrease from $59.586 million).

The reader who is interested in reasons for the observed rate pattern change may refer to Chapter 6 where details of the estimating procedure are discussed. Briefly, use of the extensive shifting assumption means that less of the excise tax will be assigned via source of income, and more will be assigned via use of income. Higher income brackets receive relatively large proportions of income from sources which are assigned excise tax under the conservative assumption. Lower income brackets spend relatively larger proportions of income on uses which are assigned excise tax under the extensive assumption. Therefore the calculated rate pattern changes as indicated. The change is similar to what occurs for all taxes considered together (see Chapter 4).

C.

Examination of the calculations based on the conservative shifting assumption with the adjustment indicates the following comparison (with the reference case):

1. noticeable decreases in the upper and lower limits of the range of rates and their difference and in the overall average rate;

2. noticeable rank shifting among the middle income brackets where the rate differences are small, and a swap between the lowest income bracket (from rank 2 to 1) and the top income bracket (from rank 1 to 2);

3. a decrease in the percentage difference between ranks 1 and 2;

4. a total excise tax of $41.017 million is accounted for in the following proportions:

pair of income bracket highest:	39%
pair of income bracket lowest:	12%

all other income brackets: 49%
$5,000 to $9,999 bracket: 37%.

These results are similar to what was found for analogous calculations involving total taxes as discussed in Chapter 4. Readers interested in the nature of the adjustment and its role in changing the tax rate patterns may refer to Chapters 4 and 6. The main point is that this allowance for tax deductibility and export reduces all rates, but has a more pronounced effect on higher income brackets because of the progressivity of the federal income taxes and the positive relation between income size and the proportion of nonwage income.

D.

As has been noted, a component of the adjustment for tax deductibility and export is the deductibility of certain state and local taxes for federal income tax purposes. The legal deduction for the Hawaii General Excise is 2 per cent of A.G.I. However, it is interesting to compare this allowable deduction with a calculated deduction which appears to be more satisfactory on theoretical grounds.[6] The total allowable deduction is approximately $1,905,000. Under the conservative shifting assumption this turns out to be about 54 per cent of the theoretical deduction which amounts to $3,505,000. Under the more extensive shifting assumption the allowable is only about 37 per cent of the theoretical which is approximately $5.1 million. The table on the following page (page 68) presents the allowable and the "theoretical" deductions (for both the conservative and the more extensive shifting assumptions) and the ratios (stated in %) of the allowable to the "theoreticals".

The figures indicate that the allowable deduction is less than the "theoretical" or calculated deduction,[7] and that the difference is not uniform over the income scale (e.g., in column (4) we see that the ratio of allowable to "theoretical" is 29.9% for the lowest income bracket and 54.4% for the highest income bracket and therefore the difference from equality of the allowable and the "theoretical", is larger for the lowest income bracket than for the highest income bracket). Thus the multi-stage feature of the Hawaii Excise Tax in combination with the Federal Personal Income Tax deductibility provision works to the disadvantage of Hawaii taxpayers (compared to a state where the calculated deduction equals the allowable), and the magnitude of the disadvantage varies over the income scale.

Income Bracket	(1) ($ Thousand) Allowable Deduction 2% of A.G.I.	(2) ($ Thousand) "Theoretical" Deduction Conservative Shifting Assumption	(3) ($ Thousand) "Theoretical" Deduction Extensive Shifting Assumption	(4) Percent (1) ÷ (2)	(5) Percent (1) ÷ (3)
Under $ 2,000	5.0	16.7	27.1	29.9	18.5
$ 2,000 - $ 2,999	33.1	58.0	92.4	57.1	35.8
3,000 - 3,999	56.1	84.4	131.8	66.5	42.6
4,000 - 4,999	82.8	131.4	199.6	63.0	41.5
5,000 - 5,999	70.0	109.5	165.1	63.9	42.4
6,000 - 6,999	179.1	272.5	401.1	65.7	44.7
7,000 - 7,999	169.2	256.9	380.1	65.9	44.5
8,000 - 8,999	147.5	198.6	295.2	74.3	50.0
9,000 - 9,999	97.8	141.4	210.3	69.2	46.5
10,000 - 14,999	557.6	1,049.1	1,538.8	53.2	36.2
15,000 and above	507.1	1,186.7	1,692.1	42.7	30.0
TOTAL	1,905	3,505	5,134	54.4	37.1

DISCUSSION OF ALTERNATIVE ESTIMATES
(COMPONENT TAXES)

E.

Examination of the calculations based on the extensive shifting assumption with the adjustment, indicates the following comparison (with the reference case):

1. very little change in the range of rates, but a noticeable decrease in the overall average rate (from 5.8 to 4.9);

2. noticable rank shifting among the middle brackets where rate differences are small, but also the following significant moves:

   top income bracket (from rank 1 to 9, with a below average rate)
   bottom income bracket (from rank 2 to 1)
   $2,000 - $2,999 (from rank 4 to 2);

3. changes in the rate differences between and among ranks similar to the changes noted above for the extensive case without adjustment;

4. the following proportions by income brackets of a total excise tax of $50.702 million:

pair of highest:	33%
pair of lowest:	14%
all others:	53%
$5,000 - $9,999:	37%.

These results are quite similar to those for the analogous calculation involving all taxes.

II. PERSONAL INCOME TAX

The personal income tax accounted for about 20% of total taxes (in 1960). For this component it was assumed that no shifting occurred, therefore there are only a pair of cases for comparison: with and without the adjustment. Refer to Table V, columns 5 and 6, which appears on the following page.

TABLE V (Continued)

Effective Rates With Respect To A.G.I.

Personal Income Tax

Income Bracket	(5) Conservative Shifting Assumption without Adjustment		(6) Conservative Shifting Assumption with Adjustment	
	Percent	Rank	Percent	Rank
Under $ 2,000	1.29	11	1.28	11
$ 2,000 - $ 2,999	2.02	10	1.96	10
$ 3,000 - $ 3,999	2.24	9	2.17	9
$ 4,000 - $ 4,999	2.33	8	2.22	8
$ 5,000 - $ 5,999	2.48	7	2.39	5
$ 6,000 - $ 6,999	2.58	5-6	2.35	6
$ 7,000 - $ 7,999	2.58	5-6	2.33	7
$ 8,000 - $ 8,999	2.86	3-4	2.60	4
$ 9,000 - $ 9,999	2.86	3-4	2.64	3
$10,000 - $14,999	3.30	2	2.78	2
$15,000 and over	4.36	1	3.19	1
Overall Total	2.88	3-4	2.51	4-5

DISCUSSION OF ALTERNATIVE ESTIMATES
(COMPONENT TAXES)

A.

For the reference case the rate assignments range from 1.3% to 4.4% and increase with income thus indicating a progressive rate structure, a feature also evidenced by the fact that the ranks based on tax rate assignments move in order from 11 (lowest rate) to 1 (highest rate) when proceeding from the bottom to the top income brackets. The highest rate is more than triple the lowest, and this multiple is similar to what was found with respect to both the total tax structure and the General Excise considered alone. The overall average rate is 2.9%, about that of brackets $8,000 to $8,999 and $9,000 to $9,999 which rank 4 and 3 respectively.

The group of five brackets with income from $5,000 to $9,999 have rates between about 2.5% and 2.9%, and this difference of only .4 percentage point (about 16% at most) is evidence of a range of proportionality here over this section of the income scale. This rather proportional range is to be expected given the nominal rate structure, as indicated in Table i below. This middle income group bears the assignment of about 38% of the personal income tax (and it is recalled that 42% of A.G.I. resides here).

Table i

Hawaii Personal Income Tax Nominal Rate Structure (1960)

(1) Taxable Income	Total taxable Income equal to or less than	Marginal rate	Maximum tax (bracket endpoint)	Endpoint income bracket "average rate" Col. (4) ÷ Col. (2)
1st $ 500	$ 500	3%	$ 15.00	3%
Next 500	1,000	3.50%	32.50	3.25%
" 1,000	2,000	4%	72.50	3.62%
" 3,000	5,000	5%	222.50	4.45%
" 5,000	10,000	6%	522.50	5.22%
" 10,000	20,000	7%	1,222.50	6.11%
" 10,000	30,000	8%	2,022.50	6.74%
all excess	all excess	9%	--------	----

The top and next-to-the-top income brackets bear the assignment of 24% and 20% of the personal income tax against 15% and 18% of A.G.I. (respectively), and for both brackets as a group the tax and income shares are 44% and 33%. The rate spread appears to increase moving from the middle to the high end of the income scale, but this feature (which indicates progressivity) is not of major magnitude.

The group of four lowest income brackets is assigned 18% of the personal income tax compared to 25% of A.G.I. The bottom bracket alone shows 1.3% and 3.8% for tax and income respectively, and the rate spread to the next bracket is relatively large (indicating progression here). For the other 3 members of this set the rate assignments are close to those of the middle income group, with only .8 of a percentage point between ranks 3 through 10 and .6 of a point between ranks 4 to 10.

B.

Now when the adjustment (for tax deductibility and export) is considered, the total amount of tax falls from about $30 million to about $26 million (approximately a 13-1/3% decrease), and all rates are lower than in the reference case.[8] There is little in the way of significant rank shift.[9] The overall average rate of 2.5% is located between ranks 4 and 5.

Thus the main changes resulting from the adjustment in the personal income tax calculations are the lowering of all rates and the decrease in the progressiveness (increase in the proportionality) of the rate structure. A useful way to note this is to observe that the lowest, middle and highest bracket groups bear the assignment of 20%, 41% and 39% of the tax respectively, and that this represents changes of +2%, +3%, and -5% (respectively) from the reference case.

III. PROPERTY TAX

The property tax accounted for about 14% of total taxes in 1960. Refer to Table V, column 7 to 10, which appears on the following page.

A.

For the reference case the rate assignments range from 1.1% (for the $5,000 to $5,999 bracket) to 4.8% (for the $15,000 and over

TABLE V (Continued)

Effective Rates With Respect To A.G.I.

Property Tax

Income Bracket	(7) Conservative Shifting Assumption without Adjustment		(8) Conservative Shifting Assumption with Adjustment		(9) Extensive Shifting Assumption without Adjustment		(10) Extensive Shifting Assumption with Adjustment	
	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank
Under $ 2,000	3.66	2	3.09	1	5.25	1	5.13	1
$ 2,000 - $ 2,999	1.79	4	1.46	3	2.53	2	2.40	2
$ 3,000 - $ 3,999	1.46	6	1.12	5	1.98	4	1.87	3
$ 4,000 - $ 4,999	1.22	10	0.95	10	1.83	6	1.71	4
$ 5,000 - $ 5,999	1.14	11	0.98	7	1.76	7	1.68	5
$ 6,000 - $ 6,999	1.41	7	0.97	8	1.59	9	1.40	8
$ 7,000 - $ 7,999	1.53	5	1.03	6	1.67	8	1.44	7
$ 8,000 - $ 8,999	1.29	9	0.88	11	1.47	11	1.29	10
$ 9,000 - $ 9,999	1.38	8	0.96	9	1.58	10	1.40	9
$10,000 - $14,999	1.80	3	1.17	4	1.91	5	1.54	6
$15,000 and over	4.84	1	2.20	2	2.12	3	1.25	11
Overall Total	2.07	3	1.31	3-4	1.98	4	1.68	5

bracket). The overall average rate, about 2%, is somewhat above that of rank number 3.

The middle income group occupies ranks 5, 7 through 9, and 11. Here the range is from 1.53% to 1.14%, that is about .4 percentage point (at most, about 30%). In fact, this range covers all brackets between $3,000 and $9,999. Thus, as judged by the absolute size of the rate spread, the structure is rather proportional here. The middle income group bears the assignment of about 27% of the property tax (which is relatively low compared with about 30% of total taxes and excise tax, and about 38% of the personal income tax, and about 42% of A.G.I.).

The pair of highest income brackets occupy ranks 1 and 3, with a 3 percentage point rate difference between them which indicates a progressive range. This group bears the assignment of about 51% of the property tax (for total taxes, excise, personal income tax, and A.G.I. the percentages were 48%, 48%, 44% and 33% respectively). The four lowest income brackets occupy ranks 2, 4, 6 and 10 (moving from the bottom income bracket up) with rates from 3.7% to 1.2% and a 1.9 point difference between the bottom and next-to-the-bottom brackets (the area of most of the regression). This group accounts for about 22% of the property tax (total tax, excise, personal income tax and A.G.I. proportions are 22%, 22%, 18% and 25% respectively). Thus it appears that the pairs of brackets at either extreme of the income scale bear the highest rates under this set of calculations for the property tax.

B.

When the adjustment is introduced and the conservative shifting assumption maintained, the total amount of property tax involved declines to $13.5 million (from the reference case $21.5 million) every rate is lower, and the overall average rate is 1.3%, between that of ranks 3 and 4. Again the highest rates appear at the extreme ends of the income scale; this time the bottom and next-to-bottom income brackets rank 1 and 3, and the top and next-to-the-top income brackets rank 2 and 4 respectively. Also there is relative rate proportionality in the middle brackets. Rather sizeable rate spreads occur between the pair of lowest income brackets (indicating a regressive area) and between the pair of highest income brackets (indicating a progressive area). The rank shifting in the middle group is not very important, and in general the situation for this set of calculations is quite similar to that of the reference case.

C.

Now when the extensive shifting assumption is used without adjustment the total amount of property tax involved is about $20.4 million (roughly 95% of the reference case), every rate except that of the top income bracket is higher than in the reference case, and the overall average rate is about 2%, equal to that of rank number 4. Once more the highest rates are assigned at the income extremities; the pair of bottom brackets occupy ranks 1 and 2 and the top bracket has rank 3.[10] The first five brackets all have higher ranks than in the reference case, whereas all other brackets have lower ranks, thus showing the differential impact of the change in shifting assumption.

D.

For the case of the extensive shifting assumption with adjustment the total property tax involved is about $17.4 million, and the average overall rate is about 1.7%, equal to that of rank number 5. The 5 highest ranks are occupied by the five lowest income brackets, and the top income bracket has the lowest rate of all, so in a gross sense the rate structure is regressive. The situation with respect to the spread of rates is similar to what occurs in the case discussed immediately above.

IV. FUEL TAX

The fuel tax, which accounted for about 12% of the total tax (in 1960), is the last of the major components to be discussed in detail. The fuel tax referred to here includes Hawaii state and local gasoline, diesel fuel, butane, aviation fuel, and small boat fuel taxes, and revenues from fuel retailing permits and motor registration fees.[11] Refer to Table V, columns 11 to 14, which appears on the following page.[12]

A.

For the reference case the rate assignments (fuel tax/A.G.I.) range from about 1% (for the bottom income bracket) to 4.9% (for the top income bracket). The overall average rate of about 1.9% is equal to that of rank number 2 (the position occupied by the $10,000 to $14,999 bracket). Not only do the highest and the next-to-highest

TABLE V (Continued)

Effective Rates With Respect To A.G.I.

Fuel Tax

Income Bracket	(11) Conservative Shifting Assumption without Adjustment		(12) Conservative Shifting Assumption with Adjustment		(13) Extensive Shifting Assumption without Adjustment		(14) Extensive Shifting Assumption with Adjustment	
	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank
Under $ 2,000	0.98	11	0.52	11	2.17	1	2.16	1
$ 2,000 - $ 2,999	1.16	8	0.84	9	1.60	6	1.55	5
$ 3,000 - $ 3,999	1.01	10	0.69	10	1.41	9	1.36	9
$ 4,000 - $ 4,999	1.26	7	0.98	5	1.69	4	1.61	3
$ 5,000 - $ 5,999	1.07	9	0.91	7	1.57	7	1.52	6
$ 6,000 - $ 6,999	1.49	3	1.05	3	1.72	3	1.57	4
$ 7,000 - $ 7,999	1.48	4	0.99	4	1.63	5	1.47	7
$ 8,000 - $ 8,999	1.27	6	0.86	8	1.38	10	1.25	10
$ 9,000 - $ 9,999	1.37	5	0.94	6	1.48	8	1.37	8
$10,000 - $14,999	1.96	2	1.28	2	1.97	2	1.66	2
$15,000 and over	4.90	1	2.13	1	1.32	11	0.97	11
Overall Total	1.94	2	1.15	2-3	1.62	6	1.45	6

brackets bear the highest rate assignments, but their rates are substantially higher than the others, and the highest rate is much higher than the next highest.[13] Roughly speaking, the structure is mildly progressive through incomes up to $10,000, and more progressive beyond this point.[14]

B.

The picture changes rather noticeably when the extensive shifting assumption is used. In this case the amount of tax involved is about $17 million (approximately 85% of the amount in the reference case). Rates range from about 1.3% (for the top income bracket) to about 2.2% (for the bottom income bracket). The top and bottom brackets have exchanged ranks; the overall range of rates has narrowed considerably; the rates for all incomes below $10,000 are higher, and so is the overall average rate (1.6%) which here is between that of ranks 5 and 6; there is no change in the $10,000 - $14,999 bracket rate, and the top bracket's rate is considerably lower. In the large, the structure is proportional between $2,000 and $10,000 incomes.

C.

For the case of the conservative shifting assumption with adjustment the amount of fuel tax involved is about $12 million (60% of the amount in the reference case). Naturally all rates are lower than in the reference case, and the range of rates is much narrower, but the structure is quite similar. The top and the next-to-the-top income brackets occupy ranks 1 and 2, with a relatively large differential between this pair of rates, and the rate assignments of the other brackets are rather close (absolutely) with ranks fairly similar to what was found in the reference case.

D.

When the adjustment is combined with the extensive shifting assumption the amount of fuel tax involved is $15 million (75% of the amount in the reference case). The results are quite similar to those in the case of the extensive shifting assumption without the adjustment, and the comments made above in the comparison of that case with the reference case apply fairly well here also.

This ends the discussion of alternative estimates for the four major component taxes. The next chapter gives some details of the procedures followed in constructing the estimates.

Chapter 6

ESTIMATING PROCEDURES

This chapter discusses some of the details of the estimating procedures for the major component taxes. Sections I, II, and III, respectively, take up the Excise Tax, Property Tax and Fuel Tax. The discussion of each of these three major component taxes involves the disaggregation of each into sub-components and an indication of the estimation procedure employed. The case of the Personal Income Tax does not require involved adjustments of the published data and so a detailed explanation of estimating procedures is unnecessary.

I. GENERAL EXCISE TAX[1]

The General Excise was considered in terms of the following components:

> retailing, services, theater, consumption, rentals, contracting, sugar, pineapple, interest, commissions, public utilities--air lines, manufacturing, wholesaling (including compensating), and all others (including: insurance solicitors, producing, blind vendors, intermediary services, and others).[2]

A. Conservative Shifting Assumption

Retailing, services, and theater were grouped together and handled under the fixed[3] assumption of 100 per cent forward shifting. Therefore this trio of components (which represented about 56 per cent of excise tax collections: 45% + 10% + 1%) was assigned directly to consumers. The net amount of this tax (net = gross or actual collections minus about 10 per cent deduction for visitor sales)[4] was assigned to the eleven income brackets on the basis of results of the 1960 - 61 survey of consumer expenditure patterns in Honolulu by the U. S. Labor Department Bureau of Labor Statistics. Data is presented in Appendix Table 37. The assignment of this portion of the excise tax is based on a weighted average pattern (for each income bracket) of all consumer expenditure items with the exclusion of housing.

HAWAII TAX RATE DISTRIBUTION ESTIMATES

In general, the method for calculating the expenditure pattern parameters involves the following steps:

N_i = number of spending units in income (census) bracket i.

E_{ij} = dollars of expenditure by spending unit in bracket i on item j.

$S_{ij} = (N_i)(E_{ij})$ = total dollars of expenditure by spending unit in bracket i on item j.

$$\sum_{i=1}^{n}(S_{ij}) = \sum_{i=1}^{n}\left[(N_i)(E_{ij})\right]$$ = overall total dollars of expenditure by all units in all brackets on item j.

$$R_{ij} = \frac{S_{ij}}{\sum_{i=1}^{n}(S_{ij})} = \frac{(N_i)(E_{ij})}{\sum_{i=1}^{n}\left[(N_i)(E_{ij})\right]}$$ = proportion of overall total of dollars of expenditure (by all units in all brackets) on item j assigned to bracket i.

C_{kj} = total dollars of tax k to be assigned by item j, i.e., expenditure on item j is designated as the basis for the assignment of dollars of specified tax k to income brackets.

$$T_{ijk} = (R_{ij})(C_{jk}) = \frac{C_{jk}S_{ij}}{\sum_{i=1}^{n}(S_{ij})} = \frac{C_{jk}(N_i)(E_{ij})}{\sum_{i=1}^{n}\left[(N_i)(E_{ij})\right]}$$ = the dollars of this specified tax k assigned to income bracket i on the basis of expenditure on item j.

Data is given in Appendix Tables 24 and 25.

The public utilities--airlines component (representing less than 1 per cent of the total excise tax) has been handled in a similar fashion with respect to the fixed assumption of 100 per cent forward shifting, but the estimated portion applicable to residents is 37 per cent. This was assigned to income brackets on the basis of expenditure item: "other travel".[5] For all calculations of the ratio tax/income, based on the conservative shifting assumption, no other components of the General Excise were assigned to income groups on the basis of consumer expenditure patterns.

While on the subject of the conservative shifting assumption it will be useful to indicate the handling of the other excise components in this situation.[6] In each case it is assumed that no shifting occurs. The contracting component (about 14 per cent of the total excise) was assigned out of corporate profits and therefore the allocation to income brackets was on the basis of the income size distribution of dividend income received.[7]

The rental component (about 8 per cent of the total excise) was divided in half and 50 per cent was assigned on the basis of the distribution dividends received, and the basis for the other half was the distribution of rental income.[8]

The sugar component (about 3 per cent of the total excise) was handled under the fixed assumption of zero shifting (because of quota marketing under world price), and the assignment to income brackets was based on the distribution of dividend income.

The pineapple component (about 3-1/2 per cent of the total excise) was treated under the fixed assumption of 100 per cent forward shifting (because of the rather powerful position in the market held by pineapple firms), but it was also assumed that total output was exported and therefore none of this tax was assigned to resident taxpayers.

The interest component (less than 1 per cent of the total excise) was assigned on the basis of dividend income received. It was assumed that this interest represented lending by firms to consumers that these firms are not primarily in the lending business, and that the firms are corporations (for example, certain auto sellers and department stores).[9]

The commissions component (about 2 per cent of the total excise) was divided in half and 50 per cent was assigned on the basis of the

distribution of dividends received, and the basis for the other half was the distribution of non-corporate business profit.

The manufacturing and consumption components (each slightly over 2 per cent of the total excise) were handled together,[10] under the fixed assumption of zero shifting, which reflects the competitive position of local manufacturers vis-a-vis their non-local counterparts. Data insufficiencies precluded any systematic estimate of corporate versus non-corporate manufacturing activity and a 50%-50% division was assumed. Thus the assignment to income brackets of half of the amount of tax was based on the distribution of non-corporate business profits.

The wholesaling (4 per cent of the total excise) and compensating (less than 1/2 of 1 per cent of the total excise) components were handled together.[11] The 50%-50% division between corporate and non-corporate activity was used[12] and therefore tax assignments to income brackets involved both the dividend and non-corporate business profit bases. The group of all other components (slightly over 2 per cent of the total excise) was handled in the same manner.

B. Extensive Shifting Assumption

The next task is to indicate the treatment of the General Excise components under the more extensive shifting assumption. It has been noted that several components were handled under the fixed assumptions regarding shifting, and therefore for these items the move between shifting assumption involves no change. This is the case for the retailing, services, and theater group, public utilities--airlines, and pineapple components, for which the 100 per cent forward shifting assumption is maintained. The manufacturing and consumption group, and sugar components are in a similar situation, but here the zero forward shifting assumption is maintained. For the remainder of the components, the replacement of the conservative by the more extensive shifting assumption involves a change. These will be taken up in turn,[13] and it will be noted that the more extensive assumption represents 100 per cent forward shifting in each case.[14]

The contracting component may be handled in steps.

1. Assume 100% forward shifting from contractor.

    a. The proportion of contracting which represents work for the Federal Government has been estimated

at about 15%[15] and the remaining 85% will be referred to as net contracting, the purchasers of which are subject to forward shifting of the tax (the 15% government share is assumed borne by the federal government and therefore is excluded from further calculations).

b. It has been estimated[16] that about 60% of net contracting is for housing and the 60% of housing is for rental. Therefore (.85)(.6)(.6) = 30.6% of contracting is for rental housing.

2. Assume 100% shift of 30.6% of this tax from housing owners to renters.[17]

   a. It has been estimated[18] that (.212)(.306) = 6.5% of contracting represents housing rentals by nonresidents and therefore this portion of this excise component is excluded from further calculations.

   b. Thus 24.1% of the contracting component is assigned to resident housing renters and the tax is apportioned among the income brackets on the basis of housing expenditure patterns.

3. Since the estimated[19] owner occupied housing proportion is 40%, (.85)(.6)(.4) = 20.4% is the share of this excise component assigned to owner occupiers, given the assumption of no nonresident taxpayers among the owner occupiers. Thus this 20.4% of the contracting component (making 24.1% + 20.4% = 44.5%) is apportioned among the income brackets on the basis of housing expenditure patterns.

4. Item 1.b noted the estimate that 60% of net construction is for housing and this implies a 40% residual for business building, that is, (.85)(.40) = 34% of the gross. It has been assumed that contractors and building owners engage in 100% forward shifting to occupiers. Furthermore, it will be assumed that businesses shift this (34%) portion of the contracting component forward to consumers

> and for simplicity, the assignment to income brackets is made on the basis of the "all goods and services" expenditure patterns, after allowance for a 9.5% (of the 34%) deduction for sales to nonresidents.[20]

Thus, under the more extensive shifting assumption the contracting component is allocated as follows:

> 24.5% to nonresidents (15% to federal government, 6.5% to nonresident renters, and 3% via visitor sales);
>
> 44.5% assigned to income brackets based on housing expenditure, and
>
> 31% based on "all goods and services" expenditure.

The rentals component is dealt with in a similar fashion. Rentals are estimated to be 60% for housing and 40% for nonhousing (or business). When the 21.2% visitor share is applied, it is found that approximately 12.7% [i.e., (.212)(.6)] of the rental component is assigned to nonresidents and therefore excluded from further calculations, and about 47.3% [i.e., (.788)(.6)] is assigned to income brackets on the basis of housing expenditures.[21] With respect to the 40% which involves businesses which use rented premises, it is assumed that a 100% forward shift to consumers occurs. Therefore the 9.5% visitor sales proportion is recognized and so 3.8% [i.e., (.095)(.4)] is excluded and 36.2% [i.e., (.905)(.40)] is assigned to income brackets based on "all goods and services" expenditures. Thus for the rental component, 47.3% is assigned via housing expenditures, 36.2% via "all" expenditures, and 16.5% is excluded (via "export").

The interest component was assumed forward shifted 100% to consumers, and assignment to income brackets was based upon house operation and furniture and equipment expenditure patterns. For the commissions component the "all goods and services" expenditure pattern was taken to be relevant for income bracket assignment under the full forward shifting assumption.

The group of wholesaling and compensating components was shifted forward in three sections: about 60% via retailing and services, and about 20% for both contracting and the set of manufacturing, sugar and pineapple.[22] The final assignments then followed these components.

The group of all other components was, under the extensive shifting assumption, handled in the same manner as the retailing, services, and theater group.

II. FUEL TAX

Fuel tax here includes Hawaii state and local gasoline, diesel fuel, butane, aviation fuel and small boat fuel taxes, and revenues from fuel retailing permits and motor vehicle registration fees. The relevant data is presented in Appendix Tables 44 and 45.

Gasoline accounts for approximately 60% of the total fuel tax (total is about $2 million). The assumption that the purchaser of the fuel has the tax shifted to him is maintained throughout this discussion, and it is useful to distinguish between business and nonbusiness gasoline purchases. A 50%-50% split between business and nonbusiness is assumed here.[23]

The business portion will be considered first. In all cases alternative calculations which recognize the "tax export" adjustment have been made. Under the conservative shifting assumption, 50% of this portion is assigned to corporate profits (and allocated to income brackets via dividend income; see Appendix Table 29) and the other 50% to noncorporate business income (see Appendix Table 27 for the distribution via noncorporate business profit). Under the extensive shifting assumption, the entire business portion is distributed among the income brackets via the all goods and services expenditure pattern data. The nonbusiness portion was handled under the maintained assumption (in both the conservative and the more extensive cases) of no shifting by the gasoline purchaser (consumer). Thus the distribution among the income brackets was made on the basis of the automobile expenditure pattern data (see Appendix Table 46), after deducting 10% (of this 50% portion of the gasoline total) to allow for "visitor sales".[24]

Diesel and butane are handled together, and they account for less than 3% of the total fuel tax. This is assumed to be all business and is handled in the same manner as the business portion of the gasoline component (see Appendix Tables 27 and 29).

The small boat fuel tax and the fuel retail permits components separately, and together account for less than 1% of the total.

These were both handled in the same fashion as the gasoline component (including the business/nonbusiness distinction). See the Appendix Table references given for gasoline.

Motor vehicle registration fees account for about 25% of the fuel tax total. This component is broken down into three parts. The auto portion (including taxis), about 3/5 of total fees, was handled just as the gasoline component. The bus, truck and trailer portion was handled just as the diesel component. The motorcycle portion assumed all nonbusiness was treated in the same manner as the nonbusiness portion of the gasoline. See the Appendix Table references noted above.

The aviation fuel component accounts for about 12% of the fuel tax total. It was assumed that this was all business, and a distinction was drawn between the tax paid by the two local airlines (Hawaiian and Aloha) and all other airlines. The tax applicable to the local lines was only about 10% of the aviation fuel total ($260,000 out of $2.8 million).[25] Under the conservative shifting assumption the assignment to income brackets was via corporate profits (see Appendix Table 29). Under the more extensive shifting assumption, it was estimated that resident travelers represented 37% and visitors accounted for 63% of the total (and therefore 63% is "exported" via "visitor sales").[26] Thus 37% of the $260,000 is allocated via the "other travel" expenditure pattern data (see Appendix Table 31). The nonlocal portion of the aviation fuel total was also handled under both the conservative and the more extensive shifting assumptions.[27 & 28] Under the conservative assumption the distribution was via corporate profits (see Appendix Table 29). Under the more extensive assumption it was estimated that visitor sales ran about 85% of the total and therefore 15% of the $2.5 million was assigned via the "other travel" expenditure pattern data (see Appendix Table 46).[29]

III. PROPERTY TAX[30]

First, statewide aggregates of real property valuations (70 per cent of "market value") were constructed for land, buildings, and the two combined (see Appendix Table 42). The aggregation was performed so as to yield housing totals (residential and apartment/hotel in the language of the data source) which distinguished home rental units (residential without exemption) from owner occupied units (fee with

exemption, lease with exemption, and units with partial exemption), and in addition totals were given for one other housing category: apartment/hotel; and three other categories: commercial and industrial, agricultural and conservation (see Appendix Tables 38, 41, and 43).[31] The following definitions will facilitate the explanation of the method for the allocation of the property tax. The results appear in Appendix Table 39.

T = statewide total property tax revenue (dollars).

A = statewide total of all classifications of land and and buildings assessed valuation net of exemptions (dollars).

$F = \frac{T}{A}$ = average property tax rate.[32]

S_1 = statewide total owner occupied (residential: fee with exemption, lease with exemption, and units with partial exemption) land and buildings assessed valuation net of exemptions.

S_2 = statewide total rental home (residential: without exemption) land and buildings assessed valuation net of exemptions.

S_3 = statewide total apartment/hotel land and buildings assessed valuation net of exemptions.

S_4 = statewide total commercial and industrial land and buildings assessed valuation net of exemptions.

S_5 = statewide total agricultural land and buildings assessed valuation net of exemptions.

S_6 = statewide total conservation land and buildings assessed valuation net of exemptions.

$$S_1 + S_2 + S_3 + S_4 + S_5 + S_6 = \sum_{i=1}^{6} S_i = A.$$

On this basis, the home owner group, represented in terms of assessed valuation by S_1, is assigned S_1 times F, written as $S_1 \cdot F$, dollars of property tax (about $7.7 million) and this is apportioned

among the several income brackets on the basis of the previously described housing expenditure pattern statistics. (Another equivalent way to view this is that total property tax is apportioned to home owners on the basis of this group's portion of total assessed valuation.[33]) Note that the assumption of zero tax shifting is maintained throughout for this group, but alternative calculations are made to allow for the adjustment for tax deductibility and export (actually, nonresident ownership is defined away).

Housing rentals are divided into home rentals and apartment/hotel rentals. The home rental group is assigned $S_2 \cdot F$ dollars of property tax (about $3.6 million). Under the zero shift assumption (conservative), half of this amount is allocated to corporate profits and half to rental income for appropriate assignment to income brackets (the assumption of the 50-50 split between corporate and noncorporate shares is maintained). Again, alternative calculations allow for the "tax export adjustment" (in fact this is the case throughout this discussion of the property tax, but it will not be mentioned again). Under the 100 per cent forward shifting assumption (more extensive), the allocation proceeds as in the owner-occupied case.

The apartment/hotel rental group is assigned $S_3 \cdot F$ dollars of property tax (about $1.9 million). Under both the conservative and the more extensive shifting assumptions the allocations are the same as for the home rental group except that in the more extensive case there is an allowance for "visitor sales", (that is, the total tax applicable here is reduced by 21.2 per cent, in a procedure similar to that used for the excise tax).

The commercial and industrial group is assigned $S_4 \cdot F$ dollars of property tax (about $5 million). The assumption of 100 per cent forward shifting from the property owner to the renter of business property is maintained throughout.[34] Under the conservative shifting assumption, half the tax is assigned to corporate profit and the other half to noncorporate business income, and the procedure is similar to that followed in the conservative assumption case for the home rental group. Under the more extensive shifting assumption (100 per cent shift to the consumer) the allocation is made on the basis of all goods and services expenditure pattern statistics.

The agricultural group is assigned $S_5 \cdot F$ dollars of property tax

(about $2.2 million). From this amount, 66.2 per cent[35] was allocated to the sugar industry, and this was handled as was the sugar portion of the excise tax. (That is, the zero shift assumption was maintained and the tax was assigned via corporate profits.) Nineteen and three-tenths (19.3) per cent was allocated to pineapple and handled as the pineapple portion of the excise tax. (That is, no entry due to 100 per cent forward shift and 100 per cent export.) The remaining 14.5 per cent was allocated to ranching and handled by the same method as the "all other" portion of the excise tax under both shifting assumptions (except that exports and visitor sales were judged negligible enough to be disregarded).

The conservation group is assigned $S_6 \cdot F$ dollars of property tax (about $1 million) and this is allocated 81.2 per cent via trusts and estates, 15.2 per cent via corporate profits, and 3.6 per cent via noncorporate business income, under the maintained assumption of zero shifting.[36]

Chapter 7

CONCLUDING REMARKS

This final chapter has three main sections. Sections I and II summarize the study's major findings with respect to total and component taxes respectively. Section III mentions some points for further study.

I. TOTAL TAXES[1]

A. Rates Based On A.G.I.

The ratio of total taxes to total income for the various income brackets has been referred to as the average effective tax rate for the bracket. Four sets of such tax rate estimates based on the A.G.I. concept of income have been discussed. The rates estimated using the conservative shifting assumption without the adjustment (for tax deductibility and export) were referred to as the reference case.[2] In this set of calculations, the group of five brackets with income of at least $5,000 but less than $10,000 have rates which are lower than the rates of the groups at both the bottom and top of the income scale.

In the set of calculations using the conservative shifting assumption with the adjustment for tax deductibility and export,[3] the situation is rather similar to what was found in the reference case. However, a comparison of the two sets of circumstances reveals that the pair of highest income brackets have lower rates under the second set of calculations (this is particularly true for the top bracket) than under the first set. This difference occurs at the expense of both the group of brackets at the low end of the income scale and the group of brackets in middle range between $5,000 and $10,000. However, the middle income group remains with the lowest rates.

When the more extensive shifting assumption[4] without the adjustment is used, the most notable features of the resulting estimates are the outstanding position of the income bracket with the highest rate, and the fact that this is the lowest income bracket. Thus the major dissimilarity between these results and those in the reference case appears with respect to the treatment of the highest and lowest

income brackets. The break between (with a relatively proportional structure within) the pair of groups of brackets with incomes between $4,000 to $4,999 and $5,000 to $9,999, appears to hold up even though all rates for these brackets are higher (that is, in Table III). The $5,000 to $9,999 group maintains its position as the set of brackets with the lowest rates.

The estimates which result from using the more extensive shifting assumption with the adjustment may be briefly summarized by noting the following:

(1) the relatively high rate of the bottom income bracket;

(2) the lower-than-average rate of the top income bracket;

(3) the maintenance of the lowest rate position by the middle income group.

In conclusion then, the four sets of tax/income ratio calculations based on the A.G.I. concept yield a somewhat similar pattern of results. In general, the middle income group of brackets ($5,000 to $9,999) has the lowest rate assignments. In addition, the five brackets within this group are treated rather uniformly (that is, their rate assignments are fairly equal).[5] Also, the high rate assignment to the bottom income bracket occurs throughout. Also, generally speaking, the rate of the bottom bracket is outstanding in the two senses that there is a rather substantial difference between this rate and (a) the next highest rate, and (b) the rates assigned to the other income brackets at the lower end of the income scale.

B. Rates Based On Other Income Concepts

The conclusions noted above refer to rate estimates based on the A.G.I. concept. The effect of using different income concepts has been examined in Chapter 4. It was concluded that there is not much effect on the pattern of rate ranks due to a change to income after federal tax, whether we use A.G.I. or "Broadened Income", and this conclusion holds for both shifting assumptions, with and without the adjustment. The main effect on rate ranks which results from a change from A.G.I. to "Broadened Income" is the rank decrease for the $2,000 - $2,999 bracket and the rank increase for the brackets $9,000 - $9,999 and $5,000 - $5,999. Consideration of the pattern of rate structure change[6] leads to the conclusion that the rate structure change due to a change from A.G.I. to the "Broadened

Income" concept is not much influenced by the choice of shifting assumption.

In summary the following may be noted.

1. Lower income bracket (under $4,000) rates are relatively low under A.G.I., in the sense that they increase more or decrease less than the average (in % terms) in each case of change in income concept considered here.

2. The pair of highest income brackets show a rather opposite pattern. With a single exception (top income bracket in change to Broadened Income) their rates are relatively high under A.G.I. (in the same relative sense as indicated above). The group of middle income brackets has relatively low rates under A.G.I. compared to A.G.I. minus federal taxes, and relatively high rates under A.G.I. compared to the other cases (again, in the same relative sense as above).

The relative percentage change measure may be used to push this summary a bit further. Our calculations lead to the following conclusions.

1. The $15,000 and over income bracket is the only one whose rates are relatively high in the reference case as compared to either the conservative shifting assumption with the adjustment, or to the extensive assumption without the adjustment. And this conclusion holds with respect to all of the income concepts dealt with in this study.

2. The effect of the change from conservative assumption without the adjustment to conservative with the adjustment is independent of the income concepts used.

3. Several points are noted with regard to the change from conservative assumption without the adjustment to extensive assumption without the adjustment. The effect on the $15,000 and over bracket is a rate reduction which in relative terms runs largest to smallest as follows: A.G.I. minus federal tax, Broadened Income minus federal tax, Broadened Income, A.G.I. For all other brackets the effect is a rate increase. The relative standing among these brackets (their ranks) is the same for all income concepts. But the rate increase effect runs largest to smallest with respect to income concepts in the same order as noted above.

4. For the change from conservative assumption without the adjustment to extensive with the adjustment, the results are the same as noted just above (in 3).

5. Checking further we find that the relative percentage change runs from most to least: rate decrease for the $15,000 and over bracket, rate increase for the under $2,000 and $5,000 - $5,999 brackets as follows:

	A.G.I.	A.G.I. minus Federal Tax	Broadened Income	Broadened Income minus Federal Tax
Reference Case vs. Conservative with the adjustment	12*	11*	9*	10*
Reference Case vs. Extensive without the adjustment	4	1	3	2
Reference Case vs. Extensive with the adjustment	8	5	7	6

(* virtually identical)

Here 1 indicates the strongest and 12 the weakest effect.

II. COMPONENT TAXES[7]

Next, let us review the way in which the results for the more important component taxes compare with the results in the total tax calculations. The remarks which follow refer to tax rates calculated with respect to A.G.I.

A. General Excise Tax

For the reference case the pattern of general excise tax rates is similar to the results for total taxes especially with regard to the

top and bottom income brackets. The excise tax rates do, however, show a range of relatively low rates and relative proportionality which extends beyond the middle income group, down the scale toward the lower income brackets.

As compared to the reference case, the calculations with the more extensive shifting assumption without the adjustment (for tax deductibility and export) show that the rates for the bottom income bracket and the top bracket are increased respectively. There is not much other change. Thus the picture here is similar to what was found with the analogous total tax calculations.

When rates are based on the conservative assumption with the adjustment there is a lowering of rates for all brackets (compared to the reference case). But the decrease is relatively large for the top bracket compared to the other income brackets, especially the bottom bracket. This is quite similar to what was found for total taxes.

Finally, the excise tax rates based on the more extensive shifting assumption with the adjustment may be considered. Here again, the results are similar to those for total taxes. Notable in this set of calculations are the relatively high rates of the under $2,000 and the $2,000 - $2,999 brackets and the relatively low rate of the $15,000 and over bracket.

B. Personal Income Tax

Personal income tax rates for the reference case show a pattern different from the total tax results. In general, the income tax rate structure is progressive, especially at the lower and upper ends of the income scale. The assumption of no shifting was the only one used, but an alternate set of rates was calculated with the adjustment (for tax deductibility and export). In this case the change has the effect of lowering rates, and is noticeable mainly in the higher brackets where the rate reduction increases with income and so there is a decrease in progressiveness. In this respect there is similarity with the total tax picture.

C. Property Tax

Property tax rates for the reference case have a pattern which is similar to the total tax results. The effect of the use of the adjustment with the conservative shifting assumption also resembles the

total tax case. The rates based on the more extensive shifting assumption with and without the adjustment show pattern changes (compared to the reference case) which are similar to the total tax results.

D. Fuel Tax

For the reference case the pattern of fuel tax rates is rather different from the total tax results. In fact the pattern is similar to that of the personal income tax, mild progression which increases beyond the $10,000 income level. The adjustment (for tax deductibility and export) pulls the rates down but the rate structure does not change much from the reference case. Use of the more extensive shifting assumption both with and without the adjustment gives a pattern more similar to that of the total tax case. Here the top bracket's rate is decreased, the bottom bracket's rate is increased and there is a rather wide range of proportionality.

E. Resume'

It appears that the General Excise Tax and the Property Tax are the major components which show congruence with the total tax rate structure. That is, if the question is why do the total tax structure estimates come out as they do, the answer is, mainly because of the excise and property tax rate structures, as modified by the rate structures of the personal income and fuel taxes. The next question, what accounts for the shape of the estimates for these components has been discussed in Chapters 5 and 6. Readers who are developing plans to change the tax rate structure may be interested in reading those chapters (including the indicated Appendix Tables) and adapting the estimates developed there.

III. AGENDA

At least three main directions of pursuit in this type of study may be suggested. These are:

A. tax rate estimate improvements which depend upon more and better data,

B. estimates of benefits received,

C. tax rate estimates for alternative tax packages (sets of nominal tax bases and rates).

A. The following items may be included under heading "A".

1. Better income data. The tax rate estimates would be more meaningful if they were based on family income data with source distributions (instead of the A.G.I. data used here).

2. More detail in the A.G.I. data. Further disaggregation of the $6,000 - $7,999, $8,000 - $9,999, and $10,000 - $14,999 brackets would be particularly useful. A $7,750 income is 1/4 again as much as a $6,200 income but both are in the same data bracket. More detail in the data will reduce the need for interpolation and improve the tax rate estimates.

3. Better expenditure pattern data. The B.L.S. Survey refers to Honolulu only, and it is a guide rather than a precise statement. The estimates at the extreme ends of the income scale are particular problem areas. For the middle income range of from $5,000 - $9,999, the Survey data is disaggregated into only two brackets, and further detail would be helpful, as in the case of the income data.

4. Better data regarding such matters as corporate and noncorporate shares of various types of business activity, housing versus nonhousing construction, residential versus nonresidential housing, nonresident ownership (of business, real property, and other assets) etc. Chapter 6 contains several examples of rather rough estimates which were necessary in the absence of better information.

5. Better data regarding the total excise tax on certain major expenditure items. This would be useful in dealing with the multi-stage characteristic of the General Excise.

6. Coordination of the data. More accurate estimates would result from income and expenditure data based on a common income concept and arranged in similar

bracket intervals.

7. Information regarding market behavior, particularly with respect to pricing policies. This is necessary to help improve (or at least evaluate) the shifting assumptions.

B. Estimates of benefits received by income brackets would provide information necessary for a net calculation (of benefits minus taxes). Benefit estimation is a difficult undertaking but some steps in this direction have been made.[8] In any case, the ability to treat the tax and expenditure sides of the budget symmetrically from an equity point of view would represent an important improvement in the basis for policy making.

C. Studies of alternative tax packages would provide information from which to estimate the relationship between changes in revenue yield and changes in the pattern of effective tax rates.

In closing, it seems useful to mention once again the suggestion that an agent of either the legislative or executive branches of the government of the State of Hawaii undertake to:

(1) check these estimates for accuracy,

(2) revise and perhaps improve them by allowing for appropriate contentions regarding assumptions and concepts,

(3) update them to reflect the availability of more recent data.

In fact, if item 3 is accomplished and this is strongly recommended, then items 1 and 2 probably will occur as by-products.

Finally, we will repeat, it is important that consideration of these estimates always include reference to the limitations discussed in Chapter 1. To the extent that these estimates are accurate, one may wish to confront them with his own notion of an ideal (or equitable) pattern. Lack of congruence between the "actual" and the ideal may then indicate a guide for policy changes.[9]

FOOTNOTES

Chapter 1

1. Federal taxes are also excluded, except where the income concept is specified to reflect income after federal taxes.

2. See Chapter 2 for further discussion.

3. See the discussion regarding the use of tax return data in Chapter 2.

4. For further discussion of this point, see Peter Newman, "An Empirical Study of the Distribution of the Tax Burden in the United States 1955 - 1959" (mimeograph to be published), University of Michigan, Ann Arbor, September, 1961, and R. A. Musgrave, "Estimating the Distribution of the Tax Burden" (mimeograph).

5. See Chapter 6 for further discussion.

6. See the text below for further discussion, and also, see Chapter 3 (Section I.-B.), Chapter 4 (Section I.-C.), and Chapter 6 (Section I.-B.).

7. See Appendix Tables 18, 19, 24 and 25.

8. See Chapter 6 and Chapter 4 (especially Section I.-C.) for further discussion.

9. An alternative procedure would have been to construct a case composed entirely of most likely assumptions about the shiftability of the excise components. This was not undertaken because it would have required rather extensive analysis to improve much on the information obtained from the "limit cases". The big obstacle to improvement here is the lack of empirical tests of tax shifting theories. The complexity of the problem makes understandable the bareness of this shelf in the cupboard of economics literature.

10. See Chapter 2 for further discussion.

11. In fact, no member of the bracket population may be "average".

12. This adjustment will be referred to as the adjustment for tax deductibility and export. See Chapter 6 and Chapter 4 (especially Section I.-B.) for further discussion. Also, see Appendix Tables 28, 32, 49 and 50.

13. For further discussion, see Chapters 3 and 4.

14. This is explained in Chapter 3, page 30.

15. See Chapter 2 for further discussion of this matter.

Chapter 2

1. This study is not the place to review or comment on the impressive literature dealing with the multidimensional problem of the appropriate tax base, even given the acceptance, say, of Henry Simon's accretion concept of income as the index of equality.

2. The explicit definition of census income may be found in U.S. Census of Population: 1960, General Social and Economic Characteristics (p. XXIV). The explicit definition of A.G.I. may be found in U.S. Treasury Department, Internal Revenue Service, Statistics of Income, 1960, Individual Income Tax Returns, pp. 22 and 27, see also State Director of Taxation, Hawaii Income Patterns for Individuals in 1960, p. VIII.

3. See P. Newman, "An Empirical Study of the Distribution of the Tax Burden in the United States, 1955 - 1959," University of Michigan, Ann Arbor, Sept., 1961 (mimeograph to be published), page 4-4, who notes the complexity of the adjustment as explained in Income Distribution in the U.S. By Size 1944 - 1950, A Supplement to the Survey of Current Business, U.S. Government Printing Office, 1953, Part I, Section 4.

4. This is especially likely to be true because of progressive income taxes.

5. However, note that, whereas with the tax aspect, there is a force which tends to increase the tendency for outshift bias at higher brackets; with the transfer aspect, the tendency toward an inshift bias perhaps decreases at higher brackets (the ratio of transfers/income declines with bracket size, but it is the absolute dollar amount which counts).

6. Recall footnote 1 in this Chapter.

7. A reasonable judgement is that part of the fractional year returns would be filed by those defined as nonresidents under the personal income tax law. Our calculations, however, did not include nonresident returns, so this source of bias was eliminated. However, it is interesting to note the close comparison of resident and nonresident returns in the under $2,000 bracket.

	Resident	Nonresident
Tax/A.G.I.[a]	1.2%[b]	0.85%[c]
Tax/Taxable Income[a]	3.4%[d]	3.1% [e]

[a] Hawaii personal income tax
[b] $510 thousand/$40 million
[c] $17 thousand/$2 million
[d] $510 thousand/$14.8 million
[e] $17 thousand/$553 thousand

To the extent that nonresident returns involve a disproportionately higher number of fractional year returns, one would expect the tax/income ratios calculated above to be higher for the nonresident than for the resident returns.

8. See Chapters 1 and 6 for amplification.

9. See Appendix Tables 18 and 22. Compare Appendix Tables 19 and 23.

10. See Appendix Tables 18 and 19.

11. $c + d = \frac{m}{s}(a) + \frac{m}{s}(b) = \frac{m(a + b)}{s} = m.$

12. An alternative procedure for total A.G.I. involves the same operation but the "a" and "b"

are derived from Hawaii data in Statistics. The difference in the results is not significant. The method used was selected so as to maintain consistency between total A.G.I. and the income source components.

13. See Appendix Table 25.

14. Let T = tax, Y = income, and t = T/Y = tax rate, all for a particular income bracket. Also, let s = the bracket's share of total tax = X, so T = sX. Thus t = sX/Y. Now let t' = s' X/Y, where s' = s(1+γ), then t' = s(1+γ)X/Y = t(1+γ). Therefore the percentage change in t = (t' - t)/t = γ, and γ = (R' - R)/R.

15. The reasoning behind the judgment that 10% is more reasonable is as follows:

    Suppose the average expenditure for the $7,500 - $9,999 bracket equals that of the $8,750 member and the average expenditure for the $9,000 - $9,999 bracket equals that of the $9,500 member; then we would expect the expenditure difference to be less than $750 (the income difference). The data shows about $6,900 expenditure for the $7,500 - $9,999 bracket, 10% of this is $690, and 110% is about $7,600. Now note that the ratio of expenditure to income may be calculated as 6900/8750 = 79% or 6900/8500 = 81%, and 80% of $9,500 is $7,600. So 10% bias seems to be a fairly decent judgment.

16. As was noted in Chapter 1, page 12, a result of the interpolation of the income and the expenditure pattern data is that the interbracket detail of the tax rate estimates in the middle income range may not be as significant as that of the rest of the income scale.

17. See Appendix Tables 14, 15 and 16.

18. Other than income taxes, from the point of view that transfers are calculated net of income tax.

19. U.S. Department of Commerce, Office of Business Economics, Survey of Current Business, August, 1963, p. 14, Table 62.

20. See W. I. Gillespie's mimeograph "The Effect of Public Expenditures on the Distribution of Income" (to be published by Brookings Institution), Tables A-1 and A-2.

21. Roughly the same results can be obtained from census data for Hawaii for either number of families or number of families and unrelated individuals; i.e., for the five brackets between $5,000 - $9,999, the relative proportion of units in each bracket, using Hawaii census data, is very similar to what is found in Statistics data (tax returns for U.S. as a whole).

22. Appendix Table 51 indicates the estimated assignments of transfer payments to income brackets. See also Appendix Table 55. The $10,000-and-over bracket has been disaggregated into two brackets, $10,000 - $14,000 and $15,000-and-over. Estimates of numbers of families and of numbers of returns, from the Statistical Abstract of U.S., 1961 and Patterns, respectively, suggest a two-to-one (for the top bracket) breakdown for these assignments.

23. Survey of Current Business, August, 1963, p. S-1.

24. Statistics of Income, 1960.

25. See Appendix Tables 12, 17 and 19.

26. The Wisconsin tax study Wisconsin State and Local Tax Burden (U. of W. Tax Study Committee, Madison, Wisconsin, Sept., 1959), suggests that A.G.I. be adjusted for indirect business taxes. An analysis of our results shows that such an adjustment does not produce any significant alteration in our patterns of effective tax rates. The logic of the adjustment is sound, however.

27. Economic Report of the President, 1964, Table C-63, p. 281.

28. At the present time, economists have not yet resolved the question of the extent of the shifting of corporate income tax. For the most recent contributions to this discussion, see Marian Krzyzamak (ed.), Effects of Corporation Income Tax (Wayne State University Press, Detroit, Michigan, 1966), and the literature cited therein.

29. This estimate was provided anonymously by a member of a local financial research institution.

30. See Appendix Tables 12 and 19.

31. See Appendix Tables 12 and 19.

32. Note that neither the employee's contribution nor the self-employed portion is considered here because it already shows up in A.G.I.

33. See the Social Security Bulletin, Annual Statistical Supplement--1960, Table 37, page 22

34. See Appendix Table 18.

35. See Statistics of Income, Fiduciary Returns --1960, Table 6, page 23.

36. See Appendix Tables 12 and 19.

37. See Appendix Table 54.

38. It accounts for, depending upon the shifting assumption, 60% or 70% of the total.

39. The total amounts to $193 or $221 million, depending on the shifting assumption, compared to A.G.I. of about $1,035 million.

40. See Statistics of Income--1960.

41. See Patterns of Income--1960.

42. For example, if for a bracket, federal data show federal personal income tax (T) of $4 million and A.G.I. (Y) of $40 million, then the ratio (T/Y) or average tax rate for that bracket is 10%. Now if state data indicate A.G.I. for that bracket is $39 million, then the calculated tax estimate is $3.9 million (= 10% of $39 million).

43. See Appendix Tables 52 and 54.

44. Regarding Estate and Trust Tax, see Fiduciary Statistics of Income, page 23, for Hawaii's share of about $1.5 million, and regarding the Gift Tax, see page 39 of the same volume, for Hawaii's share of about $1/2 million. See Appendix Tables 19 and 54. We have grouped income from estates and trusts with capital income which is Group C in Table 19. Dollar amounts were assigned to the pair of highest income brackets based on the sizes of their percentages in Group C, relative to each other.

45. Economic Report of the President, 1964, page 275, shows for 1960, a national total amount of $9,137 million. Hawaii's share is calculated as .38% (based on Hawaii's share of total A.G.I. for the U.S.).

46. The amounts involved did not warrant a disaggregated assignment. See Appendix Tables 25 and 54.

47. Economic Report of the President, 1964, Table C-57, p. 275, shows for 1960, a national payments total of about $21,494 million. Hawaii's share is calculated as .39% (based on Hawaii's share of total dividend income received for the U.S.).

48. See Appendix Tables 25 and 54.

49. See Appendix Tables 52 and 54.

50. The Tax Foundation of Hawaii publication, Government in Hawaii, 1963, page 17, offers some data for 1960 which is somewhat different than the estimates used here in our study.

	Tax Foundation	Estimate Used in Our Study
	Millions of Dollars	
Corporate income and excess profits tax	41.5	83.8
Personal income tax	162.1	138.9
Other	11.5	34.7
Total	215.1	257.4

51. See Appendix Tables 19 and 54.

52. See Appendix Tables 25 and 54.

Chapter 3

1. No normative significance is implied. We merely designate a point of reference to facilitate making comparative statements. The reference case is to be viewed as the "least adjusted case" and not necessarily as the "preferred or more reasonable case".

2. These numbers do not refer to ranks.

3. Due to insufficiency of data, there is not much that can be said about how far the range of "relative proportionality" of the $5,000 to $9,999 group extends into $10,000 to $14,999 bracket. However, we have a relationship between cumulative tax and cumulative income. This relationship is actually derived from the pair of relationships between (a) cumulative tax and income, and (b) cumulative income and income. There are data for eleven points on each of these relationships, and by connecting these points with a smooth freehand curve, it is possible to estimate the extension of the range of "relative proportionality". An estimate on this basis is that the range runs to about the $12,500 income level, and thus covers cumulative income from $262 million ($5,000 to $5,999 bracket) to about $820 million, a range of over $550 million which accounts for over half the income in total. See Chapter 1, page 12, regarding the effect of interpolation of the income and expenditure pattern data. For details, see Chapter 2, Section I, A-4.

4. Chapter 6 expands this discussion.

5. The brackets in the income range $2,000 to $4,999 (numbered 2, 3, and 4 on the graph) again sit together, but at a higher rate level. This group has been joined by the 5th bracket which has moved up and out from orbit with brackets 6 thru 9. This latter group ($6,000 to $9,999) also remains as a set, and at a slightly higher rate level. Bracket number 10 ($10,000 to $14,999) again is on the upper right arm, at a slightly higher rate than before, but note here that it is at roughly the same level as the 2, 3, 4 and 5 group (whereas in the reference case, 10 was at a substantially higher rate level than that group).

6. The expenditure data indicates a somewhat inverse relation between income size and the proportion of income spent on taxable uses (e.g., items subject to excise tax). The income source distribution data indicates that the proportion of nonwage income (e.g., income from corporate and noncorporate profits) rises with income size. The tax structure shows rather substantial dependence upon the excise tax, which is a multistage levy, applicable to most all transactions in the production and distribution process. Where shifting of this type of tax occurs, usual circumstances result in a regressive rate structure (i.e., an inverse relation between tax rates and income size). Chapters 4, 5 and 6 provide a more detailed discussion.

7. Brackets 2, 3 and 4 seem to form a group (near 10%), as do 5, 6, 7, 8 and 9 which again appear along a relatively flat floor (near 9%). Also (and noncontradictorily), brackets 2 through 8, except for 4, lie along a rather straight line. Bracket number 10 sits at about the same rate level as 4 and has a rate decrease, though to lesser degree than has bracket #11 (at 14%), from the application of the adjustment.

8. See Appendix Tables 28, 32, 49 and 50.

9. The 6, 7, 8, 9 group lies at a slightly lower rate level; whereas, the 2, 3, 4 group has shifted up to a higher rate level than before. When this case is compared to situation of the conservative shifting assumption with the adjustment, the curve for this case (extensive assumption with adjustment) shifts up to higher

rate level everywhere except for bracket #11.

10. The brackets from $3,000 through $9,999 form the rather flat bottom (at a slightly higher rate level). The $2,000 to $2,999 bracket is slightly up on the left-hand arm, and the bottom bracket locates the left extremity at a higher rate than in the reference case. There is no significant difference in the position of the $10,000 to $14,999 bracket, but bracket #11 has shifted down considerably to a rate slightly less than that of bracket #10.

11. In fact, bracket #11 lies at the third lowest rate of all. Bracket numbers 3 through 9 and 11 form the floor at a rate slightly above the reference case floor. Brackets 2 and 10 lie at rates just above the floor, and numbers #1's very high rate at 11% (higher than in the reference case), creates the left arm of the curve.

12. That is, points 2 through 10 lay close by a straight line which may be drawn to connect point 2 with point 10.

13. Readers interested in details regarding personal income tax exemptions, exclusions, deductions, credits, the nominal rate structure, etc., are referred to Hawaii Department of Taxation's annual booklet of instructions for filing personal income tax (see 1960 issue).

14. But now bracket numbers 10 (because of an almost negligible rate increase) and 11 (because of a sizeable rate decrease) appear to join the floor set (bracket numbers 3 through 9). Bracket numbers 1 and 2 have sustained rate increases and continue to lie at the left hand extremity and slightly up the left arm respectively.

15. The brackets of income greater than $2,000, but less than $10,000, are positioned fairly horizontally (at 2%)(although a bit of a peak may be distinguished); bracket #1 sits at the left hand extremity with the highest rate (2%); the $10,000 to $14,999 bracket has the next highest rate, and bracket #11 has the lowest rate (1.3%).

Chapter 4

1. Readers not interested in the details may prefer to read only the summary.

2. U.S. Bureau of Internal Revenue definition.

3. The question of whether a proportional rate structure is appropriate is not under discussion here.

4. Two aspects of this are noted. One is the difference between the ratios associated with adjacent pairs of income brackets. Here either the absolute difference between pairs or the percentage difference may be examined. On the other hand, the pairing may be between adjacent ratios (moving through the ranks). Here too, both the absolute and the percentage differences may be examined.

5. See Appendix Table 11 regarding these calculations and their counterparts mentioned throughout this chapter.

6. It could be, for example, that the 11% to 14% jump which is observed here has an underlying pattern of 12%, 13%, 14%, 15% and 16% attendar to brackets with average incomes of $10.5, $11.5, $12.5, $13.5 and $14.5 (in thousands of dollars), respectively. Or, for example, it may be that the 11% rate is associated with brackets with average income as high as $12,500, thus extending the range of "relative proportionality". See the footnote remarks ir Chapter 3, Section I, A. It appears useful tc suggest future study of this problem via a sampling of tax returns in this range of incomes. Also, see the remarks regarding interpolation in Chapter 1, Section IV, and Chapter 2, Section I, A-5.

7. University of Wisconsin Tax Study Committee, Wisconsin's State and Local Tax Burden, University of Wisconsin, Madison, Wisconsin, September, 1959.

8. Allowance for sales to visitors is a different issue and is handled separately.

9. There is a negligible rate spread of .2 percentage points between ranks 1 and 2. Between ranks 2 and 3, it is about 3 percentag points and for ranks 3 to 11 inclusive, the rate spread is about 3 percentage points.

10. It does not seem worthwhile to calculate a ran correlation coefficient here.

11 The tax assignment to the two top brackets has dropped to 39% of the total (still in excess of their 33% share of total income). The difference between their rates here shrinks to less than four percentage points, and they occupy ranks 2 ($15,000 and over) and 4 ($10,000 to $14,999). Furthermore, the differ ence between the ratio associated with the $9,000 to $9,999 bracket and that of the $10,000 to $14,999 bracket is, for this set of calculations, only about 2 percentage points. Thus, again (and perhaps more so than before), there is the prospect of an extension of the range of a "relatively proportional" structure beyond the $10,000 income.

The four lowest income brackets are found here with an assignment of 27% of the tax total, 5 percentage points more than under the previous calculation. What's more, the bottom and fourth-from-the-bottom income brackets are now assigned higher ranks (higher rates) than before, and the other pair of brackets in this group have unchanged ranks. But it should be remembered that the rates for each of these brackets are lower here than on the previous basis, it is just that rank shifts occur because of differences in the absolute size of the rate decrease experienced by the various income brackets. Also, this foursome at the low end of the income scale has ranks ranging between 1 and six, and a range of rates of about 4-1/2 percentage points, but this is cut to about 1.2 percentage points for the three brackets with income of over $2,000 and under $5,000.

12. See Chapter 6 for details.

13. i.e., shifting from the impactee upon whom the tax is levied, to the other party in the transaction involving the item which is taxed.

14. Because the tax is shifted from "seller" to "buyer", or from "business" to "consumer".

15. See footnote 3, Chapter 5.

16. In addition, the rates assigned to the $4,000 to $4,999 bracket is more than 2 percentage points higher than that of the $5,000 to $5,999 bracket which is ranked number 7, and the 6th ranked bracket ($3,000 to $3,999) lies over 1 percentage point above rank 7, thus suggesting a break from "proportionality". There is about 3 percentage points difference between the brackets $9,000 to $9,999 and $10,000 to $14,999, and previous comments on this point apply here too.

17. Furthermore, the size (absolute value) of these differences is: relatively large for the lowest income bracket, declines substantially through to the $3,000 to $3,999 bracket and rises slightly from there through to the $5,000 to $5,999 bracket, then falls sharply in $6,000 to $6,999 bracket and remains around the 1/2 percentage point level through to the $10,000 to $14,999 bracket. For the top bracket, the difference becomes positive and is quite large.

18. Further perspective is gained by noting that only about 5 percentage points separate ranks 2 and 11, and between ranks 3 and 11, this is cut to 4 points. In addition, to the situation of the bottom income bracket, another characteristic of this group is the relatively proportional treatment of the other 3 brackets between $2,000 and $4,999. In fact, these 4 brackets appear to separate into 2 groups; the bottom bracket and the other 3, and this characteristic appears, though to a lesser degree, in the other two sets of tax/income ratio estimates considered thus far. (Both of those involved the same assumptions of rather minor shifting of taxes.)

19. This is about 2-1/2 percentage points less than in the reference case (and, of course, this overall rate is about 84% of the base case rate).

20. Another aspect of these results which differs from what was found with the other sets of calculations involves the $5,000 to $5,999 bracket in relation to the group of middle income brackets. The last four ranks (8 through 11) are assigned to the brackets within the $6,000 to $9,999 range, and the rates here are all within less than 1 percentage point of one another, thus indicating a rather proportional structure in this area. In fact, there is less than 1/10 of 1 percentage point difference among the rates ranked 8 through 10, and the $8,000 to $8,999 bracket, ranked number 11, lies about 3/4 of 1 point below them with a rate of about 10%. But the $5,000 to $5,999 bracket appears to move out of this low rate group. Here it has a rate of over 12% which ranks number 6, and is in fact, just about at the overall average.

    Note that with the reference case calculations (Table I), the $5,000 to $5,999 bracket ranked number 11, but when either the more extensive shifting assumption or the adjustment is used, this bracket moves to rank 7. This bracket has an extraordinarily low percentage of income from corporate profits. Under the conservative shifting assumption, the adjustment results in a rate decline for this bracket of about 8/10 of a percentage point, by far the smallest for all brackets. Without this adjustment, the move from the conservative to the extensive shifting assumptions results in a 3 point rate increase which is rather middling. Under the extensive assumption, the adjustment results in a rate decrease of about 4/10 of a point, again the lowest of all. (But, as a matter of fact, under the extensive assumptions, the adjustment has very little impact on any of the brackets at incomes below $6,000.

    The difference between the rates assigned to the $9,000 to $9,999 bracket and the $10,000 to $14,999 bracket is about 2-1/4 percentage points, and again, the previous comments regarding the extension of the area of a relatively proportional structure apply. Along this line, it is interesting that the former bracket has rank 10 while the latter has rank 4. Thus, except for the $4,000 to $4,999 bracket which bears the assignment of a 14% rate and therefore has rank number 2, there is a difference of only 3 percentage points between the rates assigned to the brackets in the range of incomes $3,000 and above.

21. These percentages are easily computed from the data in Appendix Table 11.

22. These percentages are easily computed from the data in Appendix Table 11.

23. The relative percentage change measure is used in order to show the percentage change in rate for a bracket, relative to some standard (that is, relative to the overall average).

24. The term "L" is to be interpreted in the following sense: compared to where the adjustment is not applied, a change to calculations made with the adjustment will result in a less than average percentage decrease in the "L" bracket's tax rate (a "G" bracket will show a greater than average percentage decrease in its tax rate).

25. The term "L" is to be interpreted in the following sense: compared to the case where A.G.I. is considered to be the income concept relevant for the effective tax rate calculation, a change to the "Broadened Income" concept will result in a less than average % decrease in the "L" bracket's tax rate (a "G" bracket will show a greater than average % decrease in its tax rate).

26. A member of this bracket might interpret this to mean "fares better".

Chapter 5

1. In terms of proportion of total Hawaii state and local tax revenue produced.

2. Where the choice is made from among the 4 concepts we have considered.

3. It has been suggested that the explanation of the interbracket variation in the ratio: excise tax assignment/income is to be found in the interbracket variation in proportion of income spent on taxable items. However, this is insufficient in the case of a multistage tax, such as the general excise which applies at every level of production and distribution even if all nominal tax rates are the same and the hypothesis of 100% forward shifting is maintained. This subject is treated in the author's, "Some Analysis Concerning the Regressivity of the Hawaii General Excise", National Tax Journal, June, 1965.

4. For the overall tax structure, it may be recalled that the group of 4 brackets with income below $5,000 consistently fell together in a higher rate sector than the 5 middle bracket group (and the under $2,000 bracket was split off from the other 3 in the lowest income set).

5. Within this group, the rates do not move in any single direction with income nor is monotonicity found in either the $5,000 to $9,999 or the $2,000 to $4,999 subgroups. But with the rates packed so tightly, the intragroup pattern loses importance. The five bracket middle income group bears the assignment of about 30 per cent of the total excise tax (against about 42 per cent of the total income) which is the same proportion as occurs with total taxes. When the pair of brackets from $3,000 to $4,999 are added to this group, the tax assignment moves to 42 per cent and the income proportion becomes 58 per cent. The pair of highest income brackets bears the assignment, under this set of calculations, of about 48 per cent of the excise tax (with about 33 per cent of the income), again the same as the result obtained in the corresponding total tax calculation.

6. Briefly, the approach here is to treat the General Excise in the same manner as is acceptable (from both a theoretical and Federal I.R.S. point of view) for state income taxes. The calculation involves estimating each bracket's marginal tax (federal personal income tax) rates. These are then multiplied by the estimates of General Excise tax "payments" by (assignments to) income brackets and the result is the computed amount of the deduction for each bracket. See Appendix Tables 48, 49 and 50.

7. If the allowable were equal to the theoretical, i.e., if A = T, then $\frac{A}{T} = 1$, or $\frac{A}{T} = 100\%$. A less than T implies $\frac{A}{T}$ less than 100%.

8. The rate difference between ranks 2 and 1 is cut about in half (both absolutely and percentage wise).

9. There is some minor order rearrangement which indicates the disturbance of the neat pattern of progression. However, the range of rates here is only about .2 percentage point (about 10%) and therefore, the rather proportional character noted previously is maintained. The rate difference between the $4,000 to $4,999 bracket and the adjacent bracket (either next higher income or next higher rank) is about the same, but the difference between rank 3 and 2 is cut to 1/3 the reference case size, thus suggesting a wider range of proportionality.

10. There is a rather substantial rate spread of more than 2.5 percentage points between ranks 1 and 2 (the rank 1 rate is more than twice that of rank 2), between ranks 2 and 3 it narrows to .5 percentage point, and the rest of the ranks are rather tightly packed (especiall in the middle income range) with .6 percentage point between ranks 3 and 11.

11. See Section VI for discussion of the manner in which these components were handled.

12. See also, Appendix Tables 44, 45 and 46.

13. There is a 3 percentage point range between ranks 1 and 2, and a .5 point range between ranks 2 and 3 (occupied by the $6,000 to $6,999 bracket).

14. There is only a .5 point spread between ranks 3 and 11.

Chapter 6

1. Refer to Appendix Table 33.

2. These are listed in Director of Taxation, Calendar Year Summary, 1960.

3. Fixed in the sense that it applies in both the conservative and the extensive cases.

4. See Appendix Table 33, columns 2 and 3, and Table 34 for details.

5. As with the retailing component, see Appendix Tables 24, 25, 33, 34, and 37.

6. See Appendix Tables 33, 34, 35, and 36.

7. Conversation with M. Ono of Economic Research Center, University of Hawaii, revealed an estimate that about 90 per cent of the contracting business in Hawaii is undertaken by corporations. The income size distribution of individual source items of income is presented in Appendix Tables 18 and 19.

8. This reflects the somewhat arbitrary assumption that the rental business is one-half corporate and one-half noncorporate (this includes both housing and nonhousing rentals).

9. Conversation with Mrs. I. Rhyne, Tax Research and Planning Officer, Office of the Director of Taxation, leads me to believe that this assumption is an apt one.

10. Mrs. Rhyne informed me, that almost all of the consumption component involves imported purchases of producer's durable equipment.

11. Conversation with Mrs. Rhyne leads me to believe that this is appropriate.

12. The reason is the same as in the manufacturing case.

13. See Appendix Tables 33, 34, 35, 36, and 37. In general, replacement of the conservative by the extensive forward shifting assumption results in smaller amounts of tax entering our calculations on the basis of income source, and larger amounts of tax being assigned on the basis of income use.

14. Let me repeat that the objective of making tax/income ratio calculations under these two assumptions was to construct a pair of extreme situations which would set limits for comparison. It is noted, however, that even under the more extensive assumption of rather complete forward shifting, there are some components for which zero shifting is assumed. Similarly, under the conservative assumption, there are some components for which 100 per cent forward shifting is assumed. Thus, this pair of cases is not one of absolute extremes. Rather, each case is a combination of several "most likely" assumptions (which we are rather confident of) and several extreme assumptions (about which we are rather uncertain and therefore look at extreme opposites). In the conservative case, the extremes are all of the zero shift type, whereas, in the more extensive case, the extremes are 100 per cent forward shifting. An alternative procedure would have been to construct a case composed entirely of most likely assumptions about the shiftability of the excise components. This was not undertaken because it would have required rather extensive analysis to improve much on the information obtained from the "limit" cases.

15. This estimate is based on various studies done for state agencies and includes those by I. Gutmanis (State Income Accounts Project, U. of H., Economic Research Center, 1964), Y. S. Leong and R. M. Kamins (Hawaii's General Excise Tax, Legislative Reference Bureau, Report No. 2, 1963), G. McClure (Oahu Transportation Study, 1964), and J. R. Slaughter (Federal Expenditures in Hawaii, unpublished, M. A. thesis, U. of H., 1959).

16. Conversation with M. Ono, who referred to the Hawaii State Accounts Data he was developing.

17. An alternative assumption is that the housing owners do not shift this tax, and in this case, corporate dividends, rental income and noncorporate business profits would serve as the basis for the distribution.

18. See footnote 16.

19. See footnote 16.

20. Ideally, this (34%) portion of the contracting component would be allocated in accordance with proportions of contracting assignable to various industries (e.g., retailing, wholesaling, sugar, pineapple, etc.) so as to better estimate the amount of tax "exported" via exports, visitor sales, etc., and to achieve a better basis for the assignment of the tax to income brackets. This was not undertaken as the expected refinement to be gained and the magnitude of the amounts involved do not warrant an attempt to cope with the difficulties involved. In fact, calculations were made based on the alternative assumption of no forward shift from businesses to consumers, but these will not be presented here because of the desire to confront extreme cases. However, these calculations were based on the assumptions that all business building is owner-occupied and that business activity is split 50%-50% between corporate and noncorporate. Again, it was decided not to undertake refinements involving empirical checks on detailed estimates of the proportion of business building which is owner-occupied, and the corporate-noncorporate proportions.

21. No attempt was made to adjust for nonuniformity in the proportion of renters in each income bracket.

22. See Appendix Table 33, columns 11, 12, and 13 for details. The percentage calculations are 57.8%, 20.7% and 21.5%. The basis for these percentages is gross sales data from the Department of Planning and Economic Development, Statistical Abstract of Hawaii. The manufacturing, sugar and pineapple shares (of the 20% of the wholesaling and compensating components) have been estimated at about 40%, 30%, and 30%, respectively, using gross income (excise tax base) data.

23. P. Newman (1962, pp. 4-8) cites O. Brownlee's (1960, p. 27) quotation of the Bureau of Public Roads estimate that 70% of U.S. gasoline consumption is by automobiles. Newman further notes the Department of Commerce estimate for the U.S. in Income and Output (1958, p. 81), that 80% of new autos are for private use. Thus, he arrives at 56% [that is, (.7)(.8) = (.56)] as an estimate of total 1957-58. The data developed for the Oahu input-output table (Table 4-7), by G. McClure, et al, shows interindustry use = 35.1% of total petroleum value, and consumption use = 30.2%. Thus we may calculate 54% for business $\left(\frac{35.1}{35.1 + 30.2}\right)$ and 46% for nonbusiness. (Of course if 100% forward shifting from businesses to consumers is assumed, then the business/nonbusiness distinction may be dispensed with and the allocation may be made via the gasoline expenditure pattern data with only the bias of the gasoline pattern vis-a-vis the all goods pattern to be considered.)

24. Ten per cent (10%) is probably rather high (than low), however, this type of allowance is not made with respect to any other component of the fuel tax except aviation as noted below.

25. This data was secured by telephone from Mr. Wong and Mr. Sakamoto of the respective firms.

26. See the previous material on the public utilities - airlines component of the General Excise regarding this estimate.

27. The fact that airline fares are regulated, suggests that the more extensive assumption is the more likely.

28. In making the "tax export" adjustment, under the conservative assumption, if this tax were handled individually it would be appropriate to use only .39% of it (due to nonresident ownership), but in fact, the "average figure"

of 42% has been used so as to remain consistent with the other taxes such as on sugar and pineapple for example.

29. B. Moore of the Hawaii Visitors Bureau advises, that air passenger westbound from the mainland were:

1960		1962
10,035	intended residents	21,070
28,210	returning residents	53,800
38,245	subtotal "residents"	74,870
138,440	destination Hawaii visitors	219,005
59,264	destination beyond Hawaii visitors	103,315
3,965	unclassified	490
239,914	Total	397,680

$\frac{28210}{239914}$ = 11.8%, $\frac{38245}{239914}$ = 15.9%, $\frac{53800}{397680}$ = 13.5%,

$\frac{74870}{397680}$ = 18.8%.

30. The basic data involved in the following discussion is found in the Annual Report of the Director of Taxation (Hawaii), 1963, pages 19, 20 and 22. Our Appendix Tables 38 through 43, present the relevant information.

31. In dealing with the contracting and rental portions of the excise tax, an estimate of 40 per cent for the owner-occupied proportion of residential housing was used. From Appendix Table 41, it may be noted that the assessed valuation basis yields a somewhat higher estimate. The assessed valuation involves a stock concept, whereas, the other method used a flow concept; but each is appropriate in its place of employment. The estimates of owner-occupied proportions for land, buildings, and the two combined are 64 per cent, 54 per cent, and 60 per cent, respectively.

32. T = $21.8 million; A = $2.3 billion; source: Hawaii Director of Taxation, Annual Report, 1963.

For this data year, the property tax structure did not distinguish among classes of properties, so the application of an average property tax rate is unbiased in this regard.

33. That is, if P_1 = property tax assigned to this group, $P_1 = S_1 \cdot F$. But $F = \frac{T}{A}$, and thus $P_1 = \frac{S_1}{A} T$, or $\frac{P_1}{T} = \frac{S_1}{A}$.

34. Recall that the same procedure was followed in dealing with the rental portion of the excise tax. In fact, what is at issue here is the difference between the size distributions of rental income and corporate and noncorporate profit.

35. Appendix Table 43 present the calculation of the proportions of assessed valuation which obtain for sugar, pineapple, and ranching.

36. Louis Varga (Land Study Bureau, University of Hawaii) advises, that most of the land in the conservation category is held by a few holders of large estates. Legislative Reference Bureau, Report No. 2, 1957 ("Large Land Owners in Hawaii"), provides data on values of forest reserve land held by the six largest landholders. Only five will be considered here because Bishop's status as an eleemosynary trust warrants its exclusion. Thus it appears that Campbell, Greenwell, and McCandless are trusts, Kaneohe Ranch is a corporation, and Robinson is a noncorporate business.

Name	($ Thousands) Valuation of Conservation Cat.	% of Total
Campbell	332	81.2
Greenwell	---	----
McCandless	---	----
Sub-Total	332	81.2
Kaneohe Ranch	62	15.2
Robinson	15	3.6
TOTAL	409	100.0

Chapter 7

1. See Chapter 1, Tables I through IV.

2. See Chapter 3, footnote 1.

3. See Chapter 4, Section I, B.

4. See Chapter 4, Section I, C.

5. See Chapter 1, footnote 15.

6. See Chapter 4, Section II, B.

7. See Chapter 5, Table V.

8. See, for example:

R. A. Musgrave and D. W. Daicoff, "Who Pays the Michigan Taxes?" in Michigan Tax Study, Staff Papers (Lansing, Michigan, October, 1958).

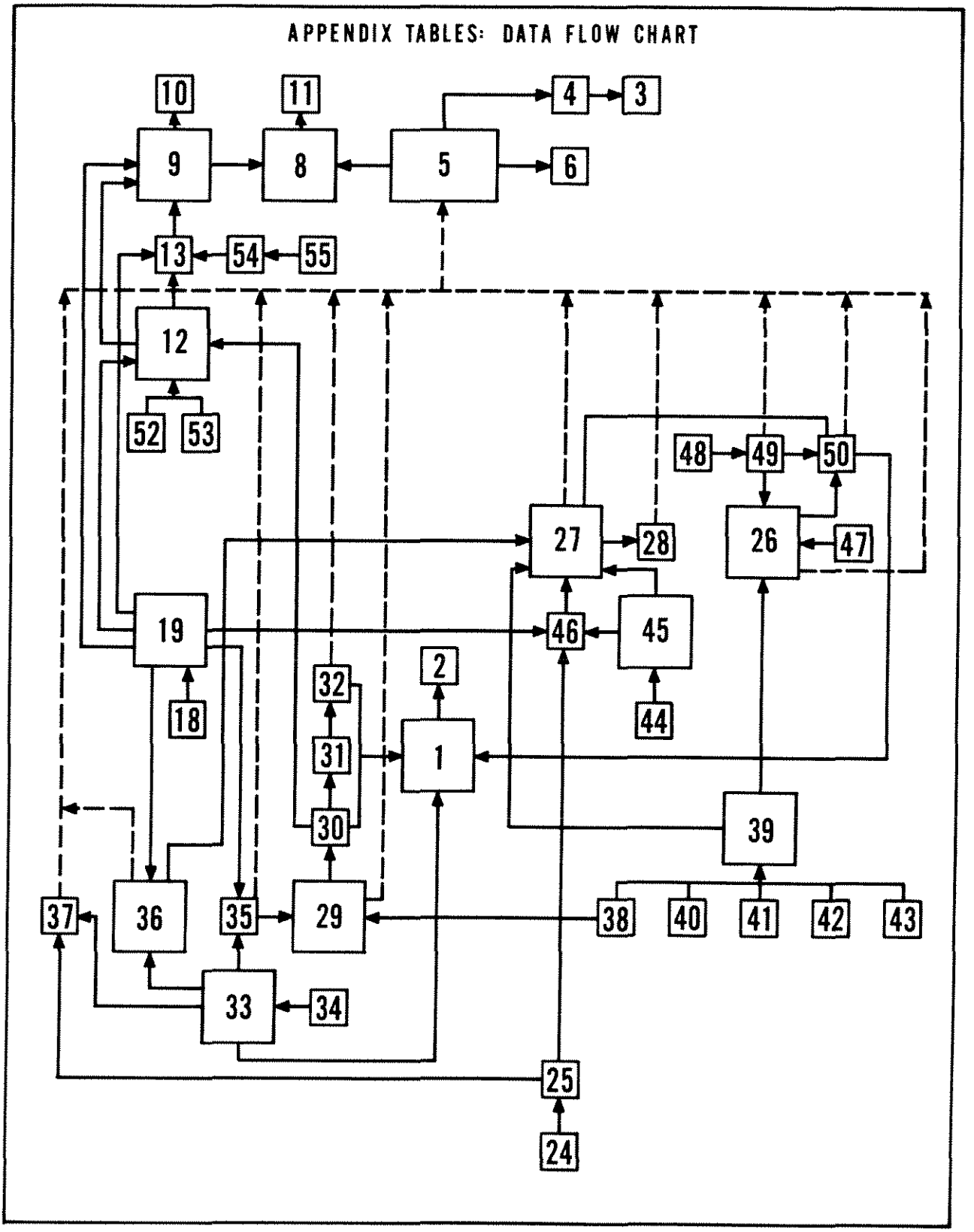
R. A. Musgrave, "Estimating the Distribution of the Tax Burden" (mimeograph).

O. H. Brownlee, Estimated Distribution of Minnesota Taxes and Public Expenditure Benefits (The University of Minnesota Press, Minneapolis, 1960).

W. I. Gillespie, "The Effect of Public Expenditures on the Distribution of Income" (mimeograph to be published by Brookings Institution).

9. See Chapter 1, page 13. However, as an example suppose one has the objective of increasing the relatively low rate estimates for the group of income brackets between $5,000 and $9,999. One way to accomplish this objective would be, for example, to increase the marginal personal income tax nominal rates for those brackets.

The gross revenue increase would depend upon the base and rate; with, say, $200 million of marginal A.G.I. in the $5,000 to $9,999 range, a marginal rate increase of 1 percentage point would gross $2 million in additional revenue. A net calculation would involve consideration of the effect on other taxes.



Note: The data flow chart represents inter-table data sources. The table to which the arrow points contains some data listed in the table from which the arrow points.

APPENDIX

Table 1

Total Tax: Assignments Outside Hawaii and Net Assignments to Hawaii

(Thousands of Dollars)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Name of Tax	Dollar Collection[a]	Sales to Federal Government, Visitor Sales, and Export[b]		Capital Outflow[c]		Federal Tax Offset[d] (Given that Capital Outflow Occurs)		Dollar Total Assigned Outside Hawaii		Dollar Total Assigned To Hawaii	
		Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption (2)+(4)+(6)	Extensive Shifting Assumption (3)+(5)+(7)	Conservative Shifting Assumption (1)-(8)	Extensive Shifting Assumption (1)-(9)
General Excise	65,837	5,956	9,791	10,759	2,115	7,809	3,147	24,524	15,053	41,313	50,784
Corporate Income	5,068	---	---	2,828	1,885	1,120	747	3,948	2,632	1,120	2,436
Bank	544	---	---	218	145	163	109	381	254	163	290
Personal Income	29,871	---	---	---	---	3,883	3,883	3,883	3,883	25,988	25,988
Real Property	21,871	417	1,417	4,035	889	3,885	2,204	8,337	4,510	13,534	17,361
Tobacco	2,118	212	212	---	---	---	---	212	212	1,906	1,906
Fuel	20,710	621	3,921	4,361	---	3,781	1,782	8,763	5,703	11,947	15,007
Public Utility	4,242	199	398	798	---	598	---	1,595	398	2,647	3,844
Liquor	3,400	340	340	---	---	---	---	340	340	3,060	3,060
Insurance	1,907	191	191	---	---	---	---	191	191	1,716	1,716
Estate and Inheritance	1,000	---	---	---	---	357	357	357	357	643	643
Unemployment Insurance	4,951	---	---	---	---	---	---	---	---	4,951	4,951
Total[e]	161,519	7,936	16,270	22,999	5,034	21,596	12,229	52,531	33,533	108,988	127,986

a/ Source: State of Hawaii, Director of Taxation, Annual Report, 1960.

b/ Source: Table 33.

c/ Source: Table 30.

d/ Source: Tables 32, 49 and 50.

e/ Columns may not sum to total due to rounding.

Note: See text, Chapter 4.

Table 2

Component Taxes: Proportions Of Total Tax
(Before and After Adjustment)

	(1)	(2)	(3)	(4)	(5)	(6)
			Dollar Total Assigned To Hawaii (After Adjustment)			
Name of Tax	Dollar Collection[a] (Thousands of Dollars)	Proportion of Total Dollar Collection (Percent)	Dollar Assigned Under Conservative Shifting Assumption[b] (Thousands of Dollars)	Proportion of Dollar Assigned (Percent)	Dollar Assigned Under Extensive Shifting Assumption[c] (Thousands of Dollars)	Proportion of Dollar Assigned (Percent)
General Excise	65,837	40.76	41,313	37.90	50,784	39.71
Corporate Income	5,068	3.14	1,120	1.03	2,436	1.90
Bank	544	.34	163	.15	290	.23
Personal Income	29,871	18.49	25,988	23.84	25,988	20.34
Real Property	21,871	13.54	13,534	12.42	17,361	13.46
Tobacco	2,118	1.31	1,906	1.75	1,906	1.49
Fuel	20,710	12.82	11,947	10.96	15,007	11.72
Public Utilities	4,242	2.63	2,647	2.43	3,844	3.05
Liquor	3,400	2.10	3,060	2.81	3,060	2.39
Insurance	1,907	1.18	1,716	1.57	1,716	1.34
Estate and Inheritance	1,000	.62	643	.60	643	.50
Unemployment	4,951	3.07	4,951	4.54	4,951	3.87
Total	161,519	100.00	108,988	100.00	127,986	100.00

a/ Source: Table 1, column 1.

b/ Source: Table 1, column 10.

c/ Source: Table 1, column 11.

Table 3

Total Tax: Dollar and Percentage Distribution By Income Brackets

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Income Brackets	Conservative Shifting Assumption Without Adjustment		Extensive Shifting Assumption Without Adjustment		Conservative Shifting Assumption With Adjustment		Extensive Shifting Assumption With Adjustment	
	Thousands of Dollars	Percent	Thousands of Dollars	Percent	Thousands of Dollars	Percent	Thousands of Dollars	Percent
Under $ 2,000	6751.3	4.41	9003.6	6.21	5722.9	5.26	8784.9	6.86
$ 2,000 - $ 2,999	5734.1	3.75	7017.3	4.85	4950.5	4.55	6750.0	5.28
$ 3,000 - $ 3,999	9739.8	6.37	11340.4	7.83	8290.2	7.63	10870.2	8.50
$ 4,000 - $ 4,999	11332.4	7.41	13366.6	9.23	10016.2	9.22	12827.8	10.03
$ 5,000 - $ 5,999	9630.9	6.30	12099.9	8.36	8868.0	8.16	11733.1	9.17
$ 6,000 - $ 6,999	11242.6	7.35	12129.7	8.37	8791.5	8.08	11054.8	8.65
$ 7,000 - $ 7,999	9881.2	6.46	10378.3	7.17	7474.6	6.88	9341.3	7.30
$ 8,000 - $ 8,999	8711.0	5.69	9264.6	6.40	6771.6	6.23	8404.4	6.57
$ 9,000 - $ 9,999	7079.6	4.63	7544.2	5.21	5554.1	5.11	6917.7	5.41
$10,000 - $14,999	25953.4	16.97	26872.4	18.56	19372.6	17.82	23429.5	18.32
$15,000 and over	46873.6	30.66	25790.1	17.81	22879.9	21.06	17785.8	13.91
Total	152930.0	100.00	144807.0	100.00	108692.0	100.00	127900.0	100.00

Source: Table 4.

Table 4

Total Tax: Allocations To Income Brackets
By Income Source And Use

(Thousands of Dollars)

Income Brackets	(1) Corporate Profits Conservative Shifting Assumption	(2) Corporate Profits Extensive Shifting Assumption	(3) Rental Income[a/] Conservative Shifting Assumption	(4) Noncorporate Business Conservative Shifting Assumption	(5) Noncorporate Business Extensive Shifting Assumption
Under $ 2,000	1,090.3	237.3	456.9	218.9	31.0
$ 2,000 - $ 2,999	708.5	154.1	179.2	379.6	53.8
$ 3,000 - $ 3,999	1,455.0	316.7	318.4	343.4	48.7
$ 4,000 - $ 4,999	1,182.3	257.3	175.8	451.7	64.0
$ 5,000 - $ 5,999	419.4	91.2	264.6	656.6	93.1
$ 6,000 - $ 6,999	2,113.4	460.0	546.2	522.9	74.2
$ 7,000 - $ 7,999	2,146.9	467.2	466.5	458.7	65.0
$ 8,000 - $ 8,999	1,652.1	359.6	323.5	519.4	73.6
$ 9,000 - $ 9,999	1,350.2	293.8	267.4	445.9	63.2
$10,000 - $14,999	4,964.9	1,080.6	980.5	2,200.7	312.1
$15,000 and over	24,850.5	5,408.6	1,675.5	5,445.9	772.2
Total	41,934.0	9,126.0	5,655.0	11,644.0	1,651.0
After Adjustment					
Under $ 2,000	246.0	53.1	342.6	164.1	23.2
$ 2,000 - $ 2,999	159.4	34.4	134.4	284.7	40.3
$ 3,000 - $ 3,999	328.4	71.0	238.8	257.5	36.5
$ 4,000 - $ 4,999	267.2	57.6	131.9	338.9	48.0
$ 5,000 - $ 5,999	94.7	20.5	198.4	492.5	69.8
$ 6,000 - $ 6,999	477.1	103.0	409.6	392.2	55.7
$ 7,000 - $ 7,999	484.7	104.7	349.9	344.1	48.7
$ 8,000 - $ 8,999	373.0	80.6	242.6	389.4	55.2
$ 9,000 - $ 9,999	304.9	65.8	200.6	334.4	47.4
$10,000 - $14,999	1,120.9	242.2	735.4	1,650.5	234.0
$15,000 and over	5,610.7	1,212.2	1,256.6	4,084.4	579.2
Total	9,467.0	2,045.0	4,241.0	8,733.0	1,238.0

a/ Zero dollars for Extensive Shifting Assumption.

Table 4 (continued)

Income Brackets	(6) Estates And Trusts	(7) Consumer	(8) Consumer	(9) Total	(10) Total	
	No Shifting	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption	
Under $ 2,000	30.9	4,954.3	8,704.4	6,751.3	9,003.6	
$ 2,000 - $ 2,999	29.2	4,437.6	6,780.2	5,734.1	7,017.3	
$ 3,000 - $ 3,999	30.9	7,592.1	10,944.1	9,739.8	11,340.4	
$ 4,000 - $ 4,999	----	9,522.6	13,045.3	11,332.4	13,366.6	
$ 5,000 - $ 5,999	14.7	8,275.6	11,900.9	9,630.9	12,099.9	
$ 6,000 - $ 6,999	45.8	8,014.3	11,549.7	11,242.6	12,129.7	
$ 7,000 - $ 7,999	50.1	6,759.0	9,796.0	9,881.2	10,378.3	
$ 8,000 - $ 8,999	9.1	6,206.9	8,822.3	8,711.0	9,264.6	
$ 9,000 - $ 9,999	5.0	5,011.1	7,182.2	7,079.6	7,544.2	
$10,000 - $14,999	51.1	17,756.2	25,428.6	25,953.4	26,872.4	
$15,000 and over	586.2	14,315.5	19,023.1	46,873.6	25,790.1	
Total	853.0	92,846.0	133,177.0	152,930.0	144,807.0	Taxes assigned
				357.0	357.0	Federal credit[b/]
				7,936.0	16,270.0	Sales to Federal Government Visitor Sales and exports[c/]
				161,223.0	161,434.0	
				161,519.0	161,519.0	Total Tax Collection
After Adjustment				294.0	85.0	(Difference as seen for Excise Tax)
Under $ 2,000	30.7	4,939.5	8,677.9	5,722.9	8,784.9	
$ 2,000 - $ 2,999	28.2	4,343.8	6,647.1	4,950.5	6,750.0	
$ 3,000 - $ 3,999	29.9	7,435.6	10,732.8	8,290.2	10,870.2	
$ 4,000 - $ 4,999	----	9,278.2	12,722.2	10,016.2	12,827.8	
$ 5,000 - $ 5,999	14.2	8,068.2	11,628.6	8,868.0	11,733.1	
$ 6,000 - $ 6,999	41.8	7,470.8	10,854.3	8,791.5	11,054.8	
$ 7,000 - $ 7,999	45.2	6,250.7	9,142.7	7,474.6	9,341.3	
$ 8,000 - $ 8,999	8.3	5,758.3	8,260.3	6,771.6	8,404.4	
$ 9,000 - $ 9,999	5.0	4,709.3	6,799.5	5,554.1	6,917.7	
$10,000 - $14,999	43.2	15,822.6	22,910.1	19,372.6	23,429.5	
$15,000 and over	428.3	11,499.9	15,566.1	22,879.9	17,785.8	
Total	675.0	85,577.0	123,942.0	108,692.0	127,900.0	Taxes assigned after all adjustments
				108,773.0	127,848.0	
				108,988.0	127,986.0	Taxes assigned after all adjustments[d/]
				294.0	86.0	(Difference as seen for Excise Tax)

b/ Source: Table 47, Estate and Inheritance Tax.
c/ Source: Table 1, columns 2 and 3.
d/ Source: Table 1, column 11.

Table 5

Component Taxes: Allocations To Income Brackets
By Income Source And Use
(Thousands of Dollars)

Income Brackets	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	EXCISE TAX								
	Corporate Profits		Rental Income[a]	Noncorporate Business		Consumer		Total	
	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption
Under $ 2,000	501.4	98.6	215.5	73.4	30.3	2,607.8	4,231.3	3,398.1	4,360.2
$ 2,000 - $ 2,999	325.7	64.0	84.5	127.2	52.6	1,691.8	2,693.4	2,229.2	2,810.0
$ 3,000 - $ 3,999	669.1	131.5	150.2	115.1	47.6	2,527.1	3,947.4	3,461.5	4,126.5
$ 4,000 - $ 4,999	543.5	106.8	82.9	151.4	62.6	2,868.5	4,357.6	3,646.3	4,527.0
$ 5,000 - $ 5,999	192.8	37.9	124.8	220.1	91.0	3,001.1	4,522.8	3,538.8	4,651.7
$ 6,000 - $ 6,999	971.8	191.0	257.6	175.4	72.5	3,111.2	4,579.1	4,516.0	4,842.6
$ 7,000 - $ 7,999	987.2	194.0	220.0	153.8	63.6	2,637.2	3,902.6	3,998.2	4,160.2
$ 8,000 - $ 8,999	759.6	149.3	152.6	174.2	72.0	2,247.2	3,339.9	3,333.6	3,561.2
$ 9,000 - $ 9,999	620.8	122.0	126.1	149.4	61.8	1,863.2	2,770.3	2,759.5	2,954.1
$10,000 - $14,999	2,282.9	448.7	462.4	737.9	305.1	6,772.7	9,933.9	10,255.9	10,687.7
$15,000 and over	11,426.4	2,245.9	790.2	1,825.9	754.9	4,405.0	6,281.0	18,447.5	9,281.8
Total	19,282.0	3,790.0	2,667.0	3,904.0	1,614.0	33,733.0	50,560.0	59,586.0	55,964.0
After Adjustment									
Under $ 2,000	110.8	21.8	161.6	55.0	22.7	2,602.8	4,226.3	2,930.2	4,270.8
$ 2,000 - $ 2,999	72.0	14.1	63.4	95.4	39.4	1,658.7	2,660.3	1,889.5	2,713.8
$ 3,000 - $ 3,999	147.9	29.1	112.6	86.3	35.7	2,471.0	3,891.3	2,817.8	3,956.1
$ 4,000 - $ 4,999	120.1	23.6	62.2	113.6	47.0	2,785.7	4,274.8	3,081.6	4,345.4
$ 5,000 - $ 5,999	42.6	8.4	93.6	165.1	68.2	2,931.1	4,452.8	3,232.4	4,529.4
$ 6,000 - $ 6,999	214.8	42.2	193.2	131.6	54.4	2,932.1	4,400.0	3,471.7	4,496.6
$ 7,000 - $ 7,999	218.2	42.9	165.0	115.4	47.7	2,468.0	3,733.4	2,966.6	3,824.0
$ 8,000 - $ 8,999	167.9	33.0	114.4	130.6	54.0	2,099.7	3,192.4	2,512.6	3,279.4
$ 9,000 - $ 9,999	137.2	27.0	94.6	112.0	46.4	1,765.4	2,672.5	2,109.2	2,745.9
$10,000 - $14,999	504.5	99.2	346.8	553.4	228.8	6,215.1	9,376.3	7,619.8	9,704.3
$15,000 and over	2,525.2	496.3	592.6	1,369.4	566.2	3,897.9	5,773.9	8,385.1	6,836.4
Total	4,261.0	838.0	2,000.0	2,928.0	1,210.0	31,828.0	48,655.0	41,017.0	50,703.0
Source: (Table:Column)	35:11 32: 3	35:12 32: 4	36: 2 28: 1	36:10 28: 3	36:11 28: 4	37: 8 50:23	37:17 50:24		

a/ Zero dollars for Extensive Shifting Assumption.

Table 5 (continued)

Income Brackets	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
	PROPERTY TAX									
	Corporate Profits		Rental Income[a/]	Noncorporate Business		Estates And Trusts	Consumer		Total	
	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption	No Shifting	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption
Under $ 2,000	188.0	41.4	241.4	50.5	.7	30.9	933.8	1,997.3	1,444.6	2,070.3
$ 2,000 - $ 2,999	122.2	26.9	94.7	87.6	1.2	29.2	529.6	1,164.7	863.3	1,222.0
$ 3,000 - $ 3,999	250.9	55.3	168.2	79.2	1.1	30.9	697.4	1,576.7	1,226.6	1,664.0
$ 4,000 - $ 4,999	203.9	45.0	92.9	104.2	1.4	----	699.0	1,609.0	1,100.0	1,655.4
$ 5,000 - $ 5,999	72.3	15.9	139.8	151.5	2.1	14.7	718.2	1,655.8	1,096.5	1,688.5
$ 6,000 - $ 6,999	364.4	80.3	288.6	120.6	1.7	45.8	622.8	1,501.5	1,442.2	1,629.3
$ 7,000 - $ 7,999	370.2	81.6	246.5	105.8	1.4	50.1	555.0	1,318.5	1,327.6	1,451.6
$ 8,000 - $ 8,999	284.9	62.8	170.9	119.8	1.6	9.1	492.7	1,156.7	1,077.4	1,230.2
$ 9,000 - $ 9,999	232.8	51.3	141.3	102.9	1.4	5.0	408.8	959.9	890.8	1,017.6
$10,000 - $14,999	856.2	188.7	518.1	507.6	7.0	51.1	1,302.5	3,184.9	3,235.5	3,431.7
$15,000 and over	4,285.1	944.6	885.3	1,256.2	17.3	586.2	738.2	1,844.7	7,751.0	3,392.8
Total	7,231.0	1,594.0	2,988.0	2,686.0	37.0	853.0	7,698.0	17,970.0	21,456.0	20,453.0
After Adjustment										
Under $ 2,000	41.5	9.1	181.0	37.9	.5	30.7	927.8	1,984.5	1,218.9	2,024.8
$ 2,000 - $ 2,999	27.0	5.9	71.0	65.7	.9	28.2	511.4	1,124.8	703.3	1,159.8
$ 3,000 - $ 3,999	55.4	12.2	126.2	59.4	.8	29.9	674.1	1,524.0	945.0	1,566.9
$ 4,000 - $ 4,999	45.1	9.9	69.7	78.2	1.0	----	667.0	1,535.3	860.0	1,546.2
$ 5,000 - $ 5,999	16.0	3.5	104.8	113.6	1.6	14.2	692.0	1,595.4	940.6	1,614.7
$ 6,000 - $ 6,999	80.5	17.7	216.4	90.4	1.3	41.8	568.2	1,370.0	997.3	1,430.8
$ 7,000 - $ 7,999	81.8	18.0	184.9	79.4	1.0	45.2	500.9	1,190.1	892.2	1,254.3
$ 8,000 - $ 8,999	63.0	13.9	128.2	89.8	1.2	8.3	449.1	1,054.4	738.4	1,077.8
$ 9,000 - $ 9,999	51.4	11.3	106.0	77.2	1.0	5.0	377.8	887.0	617.4	904.3
$10,000 - $14,999	189.2	41.7	388.6	380.7	5.2	43.2	1,100.7	2,691.6	2,102.4	2,781.7
$15,000 and over	947.0	208.8	664.0	942.2	13.0	428.3	539.3	1,347.7	3,520.8	1,997.8
Total	1,598.0	352.0	2,241.0	2,014.0	28.0	675.0	7,008.0	16,305.0	13,536.0	17,359.0
Source: (Table:Column)	29: 9 5:11	29:10 5:12	27:2 28:2	27:5 28:5	27:6 28:6	27:8 50:8	26:8 50:9	26: 9 50:10		

Table 5 (continued)

Income Brackets	(20) INSURANCE Consumer	(21) FUEL TAX Corporate Profits[a]	(22) FUEL TAX Noncorporate Business	(23) FUEL TAX Consumer	(24) FUEL TAX Consumer	(25) FUEL TAX Total	(26) FUEL TAX Total
	No Shifting	Conservative Shifting Assumption	Conservative Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption
Under $ 2,000	138.8	203.2	95.0	90.2	856.9	388.4	856.9
$ 2,000 - $ 2,999	91.3	132.1	164.8	263.5	774.5	560.4	774.5
$ 3,000 - $ 3,999	136.9	271.1	149.1	424.5	1,184.6	844.7	1,184.6
$ 4,000 - $ 4,999	148.1	220.5	196.1	722.6	1,530.0	1,139.2	1,530.0
$ 5,000 - $ 5,999	151.7	78.2	285.0	667.8	1,509.9	1,031.0	1,509.9
$ 6,000 - $ 6,999	156.0	394.0	226.9	900.2	1,756.0	1,521.1	1,756.0
$ 7,000 - $ 7,999	132.1	400.2	199.1	687.2	1,413.2	1,286.5	1,413.2
$ 8,000 - $ 8,999	112.4	307.9	225.4	529.2	1,147.9	1,062.5	1,147.9
$ 9,000 - $ 9,999	93.4	251.7	193.6	439.6	953.3	884.9	953.3
$10,000 - $14,999	344.0	925.4	955.2	1,648.1	3,542.3	3,528.7	3,542.3
$15,000 and over	211.2	4,631.7	2,363.8	846.1	2,120.1	7,841.6	2,120.1
Total	1,716.0	7,816.0	5,054.0	7,219.0	16,788.0	20,089.0	16,788.0
After Adjustment							
Under $ 2,000	138.8	44.9	71.2	89.6	851.4	205.7	851.4
$ 2,000 - $ 2,999	91.3	29.2	123.6	254.5	747.9	407.3	747.9
$ 3,000 - $ 3,999	136.9	59.9	111.8	410.3	1,145.0	582.0	1,145.0
$ 4,000 - $ 4,999	148.1	48.7	147.1	689.5	1,459.9	885.3	1,459.9
$ 5,000 - $ 5,999	151.7	17.3	213.8	643.4	1,454.8	874.5	1,454.8
$ 6,000 - $ 6,999	156.0	87.1	170.2	821.4	1,602.2	1,078.7	1,602.2
$ 7,000 - $ 7,999	132.1	88.4	149.3	620.3	1,275.6	858.0	1,275.6
$ 8,000 - $ 8,999	112.4	68.0	169.0	482.4	1,046.4	719.4	1,046.4
$ 9,000 - $ 9,999	93.4	55.6	145.2	406.2	880.9	607.0	880.9
$10,000 - $14,999	344.0	204.5	716.4	1,392.8	2,993.6	2,313.7	2,993.6
$15,000 and over	211.2	1,023.6	1,772.8	618.2	1,548.9	3,414.6	1,548.9
Total	1,716.0	1,727.0	3,790.0	6,429.0	15,007.0	11,946.0	15,007.0
Source: (Table:Column)	26:11	29:7 32:7	27:7 28:7	26: 1 50:15	26: 2 50:16		

Table 5 (continued)

Income Brackets	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)
	PUBLIC UTILITY					TOBACCO	LIQUOR	PERSONAL INCOME	ESTATES AND INHERITANCE
	Corporate Profits[a/]	Consumer		Total		Consumer	Consumer	Consumer	Consumer
	Conservative Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption	No Shifting	No Shifting	No Shifting	No Shifting
Under $ 2,000	51.8	255.7	400.9	307.5	400.9	25.5	-----	509.3	-----
$ 2,000 - $ 2,999	33.7	106.5	202.0	140.2	202.0	43.4	82.0	976.6	-----
$ 3,000 - $ 3,999	69.2	107.8	251.0	177.0	251.0	202.0	320.4	1,883.5	-----
$ 4,000 - $ 4,999	56.2	150.5	305.4	206.7	305.4	234.2	582.6	2,107.5	-----
$ 5,000 - $ 5,999	20.0	207.4	366.1	227.4	366.1	227.2	321.9	2,377.3	-----
$ 6,000 - $ 6,999	100.4	183.1	346.3	283.5	346.3	199.2	204.7	2,637.1	-----
$ 7,000 - $ 7,999	102.0	160.7	298.9	262.7	298.9	159.5	188.2	2,239.1	-----
$ 8,000 - $ 8,999	78.6	141.0	258.6	219.6	258.6	129.2	171.7	2,383.5	-----
$ 9,000 - $ 9,999	64.2	117.0	214.6	181.2	214.6	107.3	142.3	1,839.5	-----
$10,000 - $14,999	236.0	366.6	726.5	602.6	726.5	367.8	582.0	5,932.4	440.1
$15,000 and over	1,181.6	252.8	473.8	1,434.4	473.8	210.4	464.2	6,984.7	202.9
Total	1,994.0	2,049.0	3,844.0	4,043.0	3,844.0	1,906.0	3,060.0	29,871.0	643.0
After Adjustment									
Under $ 2,000	15.5	255.7	400.9	271.2	400.9	25.5	-----	506.1	-----
$ 2,000 - $ 2,999	10.1	106.5	202.0	116.6	202.0	43.4	82.0	943.1	-----
$ 3,000 - $ 3,999	20.8	107.8	251.0	128.6	251.0	202.0	320.4	1,820.6	-----
$ 4,000 - $ 4,999	16.9	150.5	305.4	167.4	305.4	234.2	582.6	2,011.0	-----
$ 5,000 - $ 5,999	6.0	207.4	366.1	213.4	366.1	227.2	321.9	2,290.5	-----
$ 6,000 - $ 6,999	30.1	183.1	346.3	213.2	346.3	199.2	204.7	2,406.1	-----
$ 7,000 - $ 7,999	30.6	160.7	298.9	191.3	298.9	159.5	188.2	2,021.0	-----
$ 8,000 - $ 8,999	23.6	141.0	258.6	164.6	258.6	129.2	171.7	2,172.8	-----
$ 9,000 - $ 9,999	19.3	117.0	214.6	136.3	214.6	107.3	142.3	1,699.9	-----
$10,000 - $14,999	70.8	366.6	726.5	437.4	726.5	367.8	582.0	5,013.5	440.1
$15,000 and over	345.5	252.8	473.8	607.3	473.8	210.4	464.2	5,103.0	202.9
Total	589.0	2,049.0	3,844.0	2,647.0	3,844.0	1,906.0	3,060.0	25,988.0	643.0
Source: (Table:Column)	29:8 32:8	26:3	26:4			26:5	26:6	26:12 49: 5	26:13

Table 5 (continued)

Income Brackets	(36) IMPUTED UNEMPLOYMENT INSURANCE Consumer No Shifting	(37) BANK Corporate Profits Conservative Shifting Assumption	(38) BANK Corporate Profits Extensive Shifting Assumption	(39) BANK Consumer[a] Extensive Shifting Assumption	(40) Total Conservative Shifting Assumption	(41) Total Extensive Shifting Assumption
Under $ 2,000	393.2	14.1	9.4	14.6	14.1	24.0
$ 2,000 - $ 2,999	652.9	9.2	6.1	9.6	9.2	15.7
$ 3,000 - $ 3,999	1,292.5	18.9	12.6	14.4	18.9	27.0
$ 4,000 - $ 4,999	2,009.6	15.3	10.2	15.6	15.3	25.8
$ 5,000 - $ 5,999	603.0	5.4	3.6	16.0	5.4	19.6
$ 6,000 - $ 6,999	-----	27.4	18.3	16.4	27.4	34.7
$ 7,000 - $ 7,999	-----	27.8	18.6	13.9	27.8	32.5
$ 8,000 - $ 8,999	-----	21.4	14.3	11.8	21.4	26.1
$ 9,000 - $ 9,999	-----	17.5	11.7	9.8	17.5	21.5
$10,000 - $14,999	-----	64.4	43.0	36.3	64.4	79.3
$15,000 and over	-----	322.4	215.1	22.3	322.4	237.4
Total	4,951.0	544.0	363.0	181.0	544.0	544.0
After Adjustment						
Under $ 2,000	393.2	4.2	2.8	14.6	4.2	17.4
$ 2,000 - $ 2,999	652.9	2.2	1.8	9.6	2.2	11.4
$ 3,000 - $ 3,999	1,292.5	5.6	3.8	14.4	5.6	18.2
$ 4,000 - $ 4,999	2,009.6	4.6	3.0	15.6	4.6	18.6
$ 5,000 - $ 5,999	603.0	1.6	1.1	16.0	1.6	17.1
$ 6,000 - $ 6,999	-----	8.2	5.5	16.4	8.2	21.9
$ 7,000 - $ 7,999	-----	8.4	5.6	13.9	8.4	19.5
$ 8,000 - $ 8,999	-----	6.4	4.3	11.8	6.4	16.1
$ 9,000 - $ 9,999	-----	5.2	3.5	9.8	5.2	13.3
$10,000 - $14,999	-----	19.3	12.9	36.3	19.3	49.2
$15,000 and over	-----	96.7	64.4	22.3	96.7	86.7
Total	4,951.0	163.0	109.0	181.0	163.0	289.0
Source: (Table:Column)	26:14	29:5 32:5	29:6 32:6	26:10		

Table 5 (continued)

Income Brackets	(42)	(43)	(44)	(45)	(46)	(47)	(48)	
	CORPORATE INCOME							
	Corporate Profits		Consumer[e]	Total		Total		
	Conservative Shifting Assumption	Extensive Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption	
Under $ 2,000	131.8	87.9	136.6	131.8	224.5	6,751.3	9,003.6	
$ 2,000 - $ 2,999	85.6	57.1	89.8	85.6	146.9	5,734.1	7,017.3	
$ 3,000 - $ 3,999	175.8	117.3	134.7	175.8	252.0	9,739.8	11,340.4	
$ 4,000 - $ 4,999	142.9	95.3	145.7	142.9	241.0	11,332.4	13,366.6	
$ 5,000 - $ 5,999	50.7	33.8	149.2	50.7	183.0	9,630.9	12,099.9	
$ 6,000 - $ 6,999	255.4	170.4	153.4	255.4	323.8	11,242.6	12,129.7	
$ 7,000 - $ 7,999	259.5	173.0	130.0	259.5	303.0	9,881.2	10,378.3	
$ 8,000 - $ 8,999	199.7	133.2	110.6	199.7	243.8	8,711.0	9,264.6	
$ 9,000 - $ 9,999	163.2	108.8	91.8	163.2	200.6	7,079.6	7,544.2	
$10,000 - $14,999	600.0	400.2	338.4	600.0	738.6	25,953.4	26,872.4	
$15,000 and over	3,003.3	2,003.0	207.8	3,003.3	2,210.8	46,873.6	25,790.1	
Total	5,068.0	3,380.0	1,688.0	5,068.0	5,068.0	152,930.0	144,807.0	Taxes assigned
						357.0	357.0	Federal credit[b]
						7,936.0	16,270.0	Sales to Federal Government Visitor Sales and Exports[c]
						161,223.0	161,434.0	
						161,519.0	161,519.0	Total tax collection
						294.0	85.0	(Difference as seen for Excise Tax)
After Adjustment								
Under $ 2,000	29.1	19.4	136.6	29.1	156.0			
$ 2,000 - $ 2,999	18.9	12.6	89.8	18.9	102.4			
$ 3,000 - $ 3,999	38.8	25.9	134.7	38.8	160.6			
$ 4,000 - $ 4,999	31.8	21.1	145.7	31.8	166.8			
$ 5,000 - $ 5,999	11.2	7.5	149.2	11.2	156.7			
$ 6,000 - $ 6,999	56.4	37.6	153.4	56.4	191.0			
$ 7,000 - $ 7,999	57.3	38.2	130.0	57.3	168.2			
$ 8,000 - $ 8,999	44.1	29.4	110.6	44.1	140.0			
$ 9,000 - $ 9,999	36.1	24.0	91.8	36.1	115.8			
$10,000 - $14,999	132.6	88.4	338.4	132.6	426.8			
$15,000 and over	663.7	442.7	207.8	663.7	650.5			
Total	1,120.0	747.0	1,688.0	1,120.0	2,435.0	108,693.0	127,903.0	Taxes assigned after all adjustments
						108,988.0	127,986.0	Taxes assigned after all adjustments[d]
						295.0	83.0	(Difference as seen for Excise Tax)

Source: (Table:Column) 29:1, 32:1; 29:2, 32:2; 26:7

b/ Source: Table 47, Estate and Inheritance Tax.

c/ Source: Table 1, columns 2 and 3.

d/ Source: Table 1, column 11.

e/ Zero dollars for Conservative Shifting Assumption.

Table 6

Component Taxes: Percentage Distribution By Income Brackets[a/]
(Before And After Adjustment)

Income Brackets	(1) Total Tax: Conservative Shifting Assumption	(2) Total Tax: Extensive Shifting Assumption	(3) Excise Tax: Conservative Shifting Assumption	(4) Excise Tax: Extensive Shifting Assumption	(5) Property Tax: Conservative Shifting Assumption	(6) Property Tax: Extensive Shifting Assumption	(7) Insurance Tax	(8) Fuel Tax: Conservative Shifting Assumption	(9) Fuel Tax: Extensive Shifting Assumption
Under $ 2,000	4.42	6.22	5.70	7.79	6.73	10.12	8.09	1.93	5.10
$ 2,000 - $ 2,999	3.75	4.84	3.74	5.02	4.02	5.97	5.32	2.79	4.61
$ 3,000 - $ 3,999	6.37	7.83	5.81	7.37	5.72	8.14	7.98	4.20	7.06
$ 4,000 - $ 4,999	7.41	9.23	6.12	8.09	5.13	8.09	8.63	5.67	9.11
$ 5,000 - $ 5,999	6.30	8.35	5.94	8.31	5.11	8.26	8.84	5.13	8.99
$ 6,000 - $ 6,999	7.35	8.38	7.58	8.65	6.72	7.96	9.09	7.57	10.46
$ 7,000 - $ 7,999	6.46	7.17	6.71	7.43	6.19	7.10	7.70	6.40	8.42
$ 8,000 - $ 8,999	5.69	6.40	5.59	6.36	5.02	6.01	6.55	5.29	6.85
$ 9,000 - $ 9,999	4.63	5.21	4.63	5.28	4.15	4.98	5.44	4.40	5.68
$10,000 - $14,999	16.97	18.56	17.21	19.10	15.08	16.78	20.05	17.56	21.10
$15,000 and over	30.65	17.81	30.97	16.58	36.12	16.59	12.31	39.03	12.63
Total[b/]	100.00	100.00	100.00	99.98	99.99	100.00	100.00	99.97	100.01
After Adjustment									
Under $ 2,000	5.26	6.87	7.14	8.42	9.00	11.66	8.09	1.72	5.67
$ 2,000 - $ 2,999	4.55	5.28	4.61	5.35	5.20	6.68	5.32	3.41	4.98
$ 3,000 - $ 3,999	7.63	8.50	6.87	7.80	6.98	9.03	7.98	4.87	7.63
$ 4,000 - $ 4,999	9.22	10.03	7.51	8.57	6.35	8.91	8.63	7.41	9.73
$ 5,000 - $ 5,999	8.16	9.17	7.88	8.93	6.95	9.30	8.84	7.32	9.69
$ 6,000 - $ 6,999	8.09	8.64	8.46	8.87	7.37	8.24	9.09	9.03	10.68
$ 7,000 - $ 7,999	6.88	7.30	7.23	7.54	6.59	7.22	7.70	7.18	8.50
$ 8,000 - $ 8,999	6.23	6.57	6.12	6.47	5.46	6.21	6.55	6.02	6.97
$ 9,000 - $ 9,999	5.11	5.41	5.14	5.42	4.56	5.21	5.44	5.08	5.87
$10,000 - $14,999	17.82	18.31	18.58	19.14	15.53	16.02	20.05	19.37	19.95
$15,000 and over	21.05	13.90	20.44	13.48	26.01	11.51	12.31	28.58	10.32
Total[b/]	100.00	99.98	99.98	99.99	100.00	99.99	100.00	99.99	99.99

a/ For dollar distributions, see Table 5.

b/ Columns may not sum to totals due to rounding.

Table 6 (continued)

Income Brackets	(10) Public Utility Tax		(11) Tobacco Tax	(12) Liquor Tax	(13) Personal Income Tax	(14) Estates And Inheritance Tax	(15) Unemployment Insurance Tax	(16) Bank Tax		(17) Corporate Income Tax	
	Conservative Shifting Assumption	Extensive Shifting Assumption						Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption
Under $ 2,000	7.60	10.43	1.34	-----	1.70	-----	7.94	2.59	4.41	2.60	4.43
$ 2,000 - $ 2,999	3.47	5.25	2.28	2.68	3.27	-----	13.19	1.69	2.89	1.69	2.90
$ 3,000 - $ 3,999	4.38	6.53	10.60	10.47	6.30	-----	26.10	3.48	4.97	3.47	4.97
$ 4,000 - $ 4,999	5.11	7.94	12.29	19.04	7.06	-----	40.59	2.81	4.74	2.82	4.75
$ 5,000 - $ 5,999	5.62	9.52	11.92	10.52	7.96	-----	12.18	0.99	3.60	1.00	3.61
$ 6,000 - $ 6,999	7.01	9.01	10.45	6.69	8.83	-----	-----	5.04	6.38	5.04	6.39
$ 7,000 - $ 7,999	6.50	7.78	8.37	6.15	7.50	-----	-----	5.11	5.98	5.12	5.98
$ 8,000 - $ 8,999	5.43	6.73	6.78	5.61	7.98	-----	-----	3.94	4.80	3.94	4.81
$ 9,000 - $ 9,999	4.48	5.58	5.63	4.65	6.16	-----	-----	3.22	3.95	3.22	3.96
$10,000 - $14,999	14.90	18.90	19.30	19.02	19.86	68.44	-----	11.84	14.58	11.84	14.57
$15,000 and over	35.48	12.32	11.04	15.17	23.38	31.56	-----	59.29	43.66	59.26	43.62
Total[b]	99.98	99.99	100.00	100.00	100.00	100.00	100.00	100.00	99.96	100.00	99.99
After Adjustment											
Under $ 2,000	10.24	10.43	1.34	-----	1.95	-----	7.94	2.59	6.01	2.60	6.41
$ 2,000 - $ 2,999	4.40	5.25	2.28	2.68	3.63	-----	13.19	1.35	3.94	1.69	4.20
$ 3,000 - $ 3,999	4.86	6.53	10.60	10.47	7.00	-----	26.10	3.45	6.29	3.47	6.60
$ 4,000 - $ 4,999	6.32	7.94	12.29	19.04	7.74	-----	40.59	2.83	6.43	2.82	6.85
$ 5,000 - $ 5,999	8.06	9.52	11.92	10.52	8.81	-----	12.18	0.98	5.91	1.00	6.44
$ 6,000 - $ 6,999	8.05	9.01	10.45	6.69	9.26	-----	-----	5.05	7.57	5.04	7.84
$ 7,000 - $ 7,999	7.23	7.78	8.37	6.15	7.78	-----	-----	5.17	6.74	5.12	6.91
$ 8,000 - $ 8,999	6.22	6.73	6.78	5.61	8.36	-----	-----	3.94	5.56	3.94	5.75
$ 9,000 - $ 9,999	5.15	5.58	5.63	4.65	6.54	-----	-----	3.20	4.60	3.22	4.75
$10,000 - $14,999	16.52	18.90	19.30	19.02	19.29	68.44	-----	11.88	17.00	11.84	17.53
$15,000 and over	22.94	12.32	11.04	15.17	19.64	31.56	-----	59.54	29.96	59.26	26.71
Total[b]	99.99	99.99	100.00	100.00	100.00	100.00	100.00	99.98	100.01	100.00	99.99

Table 7-A

TOTAL TAX: AVERAGE EFFECTIVE TAX RATE PER INCOME BRACKET BY INCOME CONCEPT

Conservative Shifting Assumption, No Adjustment (Neither Deductibility Nor Export)

	(1)	(2)		(3)		(4)		(5)	
Income Bracket	Total Tax (Thousands of Dollars)	Total Tax A.G.I. Percent	Rank	Total Tax A.G.I. minus Federal Tax Percent	Rank	Total Tax Broadened Income Percent	Rank	Total Tax Broadened Income minus Federal Tax Percent	Rank
Under $2,000	6,751.3	17.11	2	20.85	2	12.27	3	15.10	3
$ 2,000 - $ 2,999	5,734.1	11.89	5	14.32	5	8.08	11	9.55	11
$ 3,000 - $ 3,999	9,739.8	11.60	6	13.87	6	9.36	9	11.45	9
$ 4,000 - $ 4,999	11,332.4	12.53	4	15.04	4	10.74	4	13.26	4
$ 5,000 - $ 5,999	9,630.9	10.04	11	11.88	11	9.12	10	11.01	10
$ 6,000 - $ 6,999	11,242.6	10.99	8	13.08	9	9.75	7	12.15	7
$ 7,000 - $ 7,999	9,881.2	11.38	7	13.58	7	10.08	5	12.64	5
$ 8,000 - $ 8,999	8,711.0	10.44	10	12.43	10	9.58	8	11.94	8
$ 9,000 - $ 9,999	7,079.6	10.99	9	13.10	8	10.04	6	12.52	6
$10,000 - 14,999	25,953.4	14.42	3	17.88	3	13.03	2	17.02	2
$15,000 and over	46,873.6	29.29	1	40.70	1	19.26	1	31.50	1
Overall Total	152,930.0	14.78	(3)	18.16	(2-3)	12.15	(3)	15.86	(2-3)

Table 7-B

TOTAL TAX: AVERAGE EFFECTIVE TAX RATE PER INCOME BRACKET BY INCOME CONCEPT

Conservative Shifting Assumption, With Adjustment (Deductibility and Export)

	(1)	(2)		(3)		(4)		(5)	
Income Bracket	Total Tax (Thousands of Dollars)	Total Tax A.G.I. Percent	Rank	Total Tax A.G.I. minus Federal Tax Percent	Rank	Total Tax Broadened Income Percent	Rank	Total Tax Broadened Income minus Federal Tax Percent	Rank
Under $2,000	5,722.9	14.50	1	17.68	2	10.40	1	12.80	2
$ 2,000 - $ 2,999	4,950.5	10.26	5	12.37	5	6.97	11	8.24	11
$ 3,000 - $ 3,999	8,290.2	9.88	6	11.80	6	7.97	6	9.74	7
$ 4,000 - $ 4,999	10,016.2	11.08	3	13.29	4	9.50	3	11.72	4
$ 5,000 - $ 5,999	8,868.0	9.24	7	10.94	7	8.40	5	10.13	5
$ 6,000 - $ 6,999	8,791.5	8.59	10	10.23	10	7.63	8	9.50	9
$ 7,000 - $ 7,999	7,474.6	8.60	9	10.27	9	7.62	9	9.56	8
$ 8,000 - $ 8,999	6,771.6	8.12	11	9.66	11	7.45	10	9.28	10
$ 9,000 - $ 9,999	5,554.1	8.62		10.28		7.88	7	9.82	6
$10,000 - $14,999	19,372.6	10.76	4	13.34	3	9.73	2	12.70	3
$15,000 and over	22,879.9	14.30	2	19.86	1	9.40	4	15.38	1
Overall Total	108,692.0	10.50	(4-5)	12.90	(4-5)	8.64	(5)	11.27	(4)

Table 7-C

TOTAL TAX: AVERAGE EFFECTIVE TAX RATE PER INCOME BRACKET BY INCOME CONCEPT

Extensive Shifting Assumptions, No Adjustment (Neither Deductibility Nor Export)

	(1)	(2)		(3)		(4)		(5)	
Income Bracket	Total Tax (Thousands of Dollars)	Total Tax A.G.I. Percent	Rank	Total Tax A.G.I. minus Federal Tax Percent	Rank	Total Tax Broadened Income Percent	Rank	Total Tax Broadened Income minus Federal Tax Percent	Rank
Under $2,000	9,003.6	22.81	1	29.94	1	16.60	1	21.26	1
$ 2,000 - $ 2,999	7,017.3	14.55	5	18.20	5	9.96	11	11.98	11
$ 3,000 - $ 3,999	11,340.4	13.51	6	16.67	6	11.01	6	13.70	7
$ 4,000 - $ 4,999	13,366.6	14.78	4	18.33	4	12.77	3	16.10	4
$ 5,000 - $ 5,999	12,099.9	12.61	7	15.40	7	11.49	4	14.23	5
$ 6,000 - $ 6,999	12,129.7	11.86	9	14.54	9	10.66	9	13.49	9
$ 7,000 - $ 7,999	10,378.3	11.95	8	14.70	8	10.76	8	13.67	8
$ 8,000 - $ 8,999	9,264.6	11.10	11	13.57	11	10.32	10	13.04	10
$ 9,000 - $ 9,999	7,544.2	11.72	10	14.37	10	10.84	7	13.72	6
$10,000 - $14,999	26,872.4	14.93	3	19.25	3	13.74	2	18.32	2
$15,000 and over	25,790.1	16.12	2	23.08	2	11.43	5	17.88	3
Overall Total	144,807.0	13.99	(5-6)	17.78	(5-6)	11.79	(4)	15.50	(4-5)

Table 7-D

TOTAL TAX: AVERAGE EFFECTIVE TAX RATE PER INCOME BRACKET BY INCOME CONCEPT

Extensive Shifting Assumptions, With Adjustment (Deductibility and Export)

	(1)	(2)		(3)		(4)		(5)	
Income Bracket	Total Tax (Thousands of Dollars)	Total Tax A.G.I. Percent	Rank	Total Tax A.G.I. minus Federal Tax Percent	Rank	Total Tax Broadened Income Percent	Rank	Total Tax Broadened Income minus Federal Tax Percent	Rank
Under $2,000	8,784.9	22.26	1	29.21	1	16.20	1	20.74	1
$ 2,000 - $ 2,999	6,750.0	13.99	3	17.51	3	9.58	9	11.53	11
$ 3,000 - $ 3,999	10,870.2	12.95	5	15.98	5	10.56	5	13.13	5
$ 4,000 - $ 4,999	12,827.8	14.18	2	17.59	2	12.26	2	15.45	3
$ 5,000 - $ 5,999	11,733.1	12.23	6	14.93	7	11.15	4	13.80	4
$ 6,000 - $ 6,999	11,054.8	10.81	8	13.25	8	9.72	7	12.30	9
$ 7,000 - $ 7,999	9,341.3	10.75	9	13.23	9	9.68	8	12.31	8
$ 8,000 - $ 8,999	8,404.4	10.07	11	12.31	11	9.36	10	11.83	10
$ 9,000 - $ 9,999	6,917.7	10.74	10	13.18	10	9.94	6	12.58	6
$10,000 - $14,999	23,429.5	13.02	4	16.78	4	11.98	3	15.97	2
$15,000 and over	17,785.8	11.11	7	15.92	6	7.88	11	12.33	7
Overall Total	127,900.0	12.36	(6)	15.71	(6)	10.41	(5)	13.69	(4)

Table 8

Component Taxes: Average Effective Tax Rate Per Income Bracket By Income Concept And Assumptions With Respect To Shifting And Adjustment

Income Brackets	(1) Excise Tax	(2) Excise Tax ÷ A.G.I.		(3) Excise Tax ÷ A.G.I. Minus Federal Tax		(4) Excise Tax ÷ Broadened Income		(5) Excise Tax ÷ Broadened Income Minus Federal Tax		(6) Excise Tax	(7) Excise Tax ÷ A.G.I.		(8) Excise Tax ÷ A.G.I. Minus Federal Tax		(9) Excise Tax ÷ Broadened Income	
	Conservative Shifting Assumption	Conservative Shifting Assumption		Conservative Shifting Assumption		Conservative Shifting Assumption		Conservative Shifting Assumption		Extensive Shifting Assumption	Extensive Shifting Assumption		Extensive Shifting Assumption		Extensive Shifting Assumption	
	(Thousands of Dollars)	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	(Thousands of Dollars)	Percent	Rank	Percent	Rank	Percent	Rank
Under $ 2,000	3398.1	8.61	2	10.50	2	6.18	2	7.60	2	4360.2	11.05	1	14.50	1	8.04	1
$ 2,000 - $ 2,999	2229.2	4.62	4	5.57	4	3.14	11	3.71	11	2810.0	5.82	3	7.29	4	3.99	10
$ 3,000 - $ 3,999	3461.5	4.12	8	4.93	8	3.33	10	4.07	9	4126.5	4.92	6	6.07	6	4.01	9
$ 4,000 - $ 4,999	3646.3	4.03	9	4.84	9	3.46	8	4.26	8	4527.0	5.00	5	6.21	5	4.33	5
$ 5,000 - $ 5,999	3538.8	3.69	11	4.36	11	3.35	9	4.04	10	4651.7	4.85	7	5.92	7	4.42	4
$ 6,000 - $ 6,999	4516.0	4.41	6	5.25	6	3.92	5	4.88	5-6	4842.6	4.73	9	5.80	9	4.26	7
$ 7,000 - $ 7,999	3998.2	4.60	5	5.50	5	4.08	4	5.12	4	4160.2	4.79	8	5.89	8	4.31	6
$ 8,000 - $ 8,999	3333.6	4.00	10	4.76	10	3.67	7	4.57	7	3561.2	4.27	11	5.22	11	3.97	11
$ 9,000 - $ 9,999	2759.5	4.28	7	5.11	7	3.91	6	4.88	5-6	2954.1	4.59	10	5.63	10	5.25	3
$10,000 - $14,999	10255.9	5.70	3	7.06	3	5.15	3	6.72	3	10687.7	5.94	2	7.66	3	5.46	2
$15,000 and over	18447.5	11.53	1	16.02	1	7.58	1	12.40	1	9281.8	5.80	4	8.31	2	4.11	8
Overall	59586.0	5.76	3	7.07	3	4.74	3-4	6.18	3-4	55964.0	5.41	4-5	6.87	4-5	4.56	3-4
After Adjustment																
Under $ 2,000	2930.2	7.42	1	9.05	1	5.33	1	6.56	1	4270.8	10.82	1	14.20	1	7.87	1
$ 2,000 - $ 2,999	1889.5	3.92	4	4.72	4	2.66	11	3.14	11	2713.8	5.62	2	7.04	2	3.85	8
$ 3,000 - $ 3,999	2817.8	3.36	9	4.01	8	2.71	10	3.31	10	3956.1	4.71	6	5.82	6	3.84	9
$ 4,000 - $ 4,999	3081.6	3.41	6	4.09	5	2.92	8	3.60	8	4345.4	4.80	4	5.97	5	4.15	5
$ 5,000 - $ 5,999	3232.4	3.37	8	3.99	9	3.06	4	3.69	7	4529.4	4.72	5	5.76	7	4.30	3
$ 6,000 - $ 6,999	3471.7	3.39	7	4.04	7	3.01	6	3.75	5	4496.6	4.40	7	5.39	9	3.95	7
$ 7,000 - $ 7,999	2966.6	3.42	5	4.08	6	3.03	5	3.80	4	3824.0	4.40	8	5.42	8	3.96	6
$ 8,000 - $ 8,999	2512.6	3.01	11	3.58	11	2.76	9	3.44	9	3279.4	3.93	11	4.80	11	3.65	10
$ 9,000 - $ 9,999	2109.2	3.28	10	3.90	10	2.99	7	3.73	6	2745.9	4.26	10	5.23	10	4.16	4
$10,000 - $14,999	7619.8	4.23	3	6.25	3	3.83	2	5.00	3	9704.3	5.39	3	6.95	3	4.96	2
$15,000 and over	8385.1	5.24	2	7.28	2	3.44	3	5.63	2	6836.4	4.27	9	6.12	4	3.03	11
Overall	41017.0	3.96	4	4.87	4	3.26	3-4	4.25	3-4	50702.0	4.90	4	6.23	4	4.13	5

Note: For dollar distribution of different income concepts, see Table 9.

Table 8 (continued)

Income Brackets	(10) Excise Tax ÷ Broadened Income Minus Federal Tax		(11) Property Tax	(12) Property Tax ÷ A.G.I.		(13) Property Tax ÷ A.G.I. Minus Federal Tax		(14) Property Tax ÷ Broadened Income		(15) Property Tax ÷ Broadened Income Minus Federal Tax		(16) Property Tax	(17) Property Tax ÷ A.G.I.	
	Extensive Shifting Assumption		Conservative Shifting Assumption	Conservative Shifting Assumption		Conservative Shifting Assumption		Conservative Shifting Assumption		Conservative Shifting Assumption		Extensive Shifting Assumption	Extensive Shifting Assumption	
	Percent	Rank	(Thousands of Dollars)	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	(Thousands of Dollars)	Percent	Rank
Under $ 2,000	10.30	1	1444.6	3.66	2	4.46	2	2.62	2	3.23	2	2070.3	5.25	1
$ 2,000 - $ 2,999	4.80	11	863.3	1.79	4	2.16	4	1.22	7	1.44	8-9	1222.0	2.53	2
$ 3,000 - $ 3,999	4.98	10	1226.6	1.46	6	1.75	6	1.18	8-9	1.44	8-9	1664.0	1.98	4
$ 4,000 - $ 4,999	5.45	6	1100.0	1.22	10	1.46	10	1.04	10-11	1.29	10	1655.4	1.83	6
$ 5,000 - $ 5,999	5.47	5	1096.5	1.14	11	1.35	11	1.04	10-11	1.25	11	1688.5	1.76	7
$ 6,000 - $ 6,999	5.39	7	1442.2	1.41	7	1.68	7	1.25	6	1.56	6	1629.3	1.59	9
$ 7,000 - $ 7,999	5.48	4	1327.6	1.53	5	1.82	5	1.35	4	1.70	4	1451.6	1.67	8
$ 8,000 - $ 8,999	5.01	9	1077.4	1.29	9	1.54	9	1.18	8-9	1.48	7	1230.2	1.47	11
$ 9,000 - $ 9,999	5.37	8	890.8	1.38	8	1.65	8	1.26	5	1.58	5	1017.6	1.58	10
$10,000 - $14,999	7.29	2	3235.5	1.80	3	2.23	3	1.62	3	2.12	3	3431.7	1.91	5
$15,000 and over	6.43	3	7751.0	4.84	1	6.73	1	3.18	1	5.21	1	3392.8	2.12	3
Overall	5.99	3-4	21456.0	2.07	3	2.55	3	1.70	3	2.22	3	20453.0	1.98	4
After Adjustment														
Under $ 2,000	10.08	1	1218.9	3.09	1	3.76	1	2.22	1	2.73	1	2024.8	5.13	1
$ 2,000 - $ 2,999	4.63	10	703.3	1.46	3	1.76	3	0.99	4	1.17	4	1159.8	2.40	2
$ 3,000 - $ 3,999	4.78	8	945.0	1.12	5	1.34	5	0.91	5-6	1.11	6	1566.9	1.87	3
$ 4,000 - $ 4,999	5.23	4	860.0	0.95	10	1.14	9-10	0.82	10	1.01	10-11	1546.2	1.71	4
$ 5,000 - $ 5,999	5.33	3	940.6	0.98	7	1.16	7-8	0.89	7	1.07	9	1614.7	1.68	5
$ 6,000 - $ 6,999	5.00	6-7	997.3	0.97	8	1.16	7-8	0.86	9	1.08	8	1430.8	1.40	8
$ 7,000 - $ 7,999	5.04	5	892.2	1.03	6	1.23	6	0.91	5-6	1.14	5	1254.3	1.44	7
$ 8,000 - $ 8,999	4.62	11	738.4	0.88	11	1.05	11	0.81	11	1.01	10-11	1077.8	1.29	10
$ 9,000 - $ 9,999	5.00	6-7	617.4	0.96	9	1.14	9-10	0.88	8	1.09	7	904.3	1.40	9
$10,000 - $14,999	6.62	2	2102.4	1.17	4	1.45	4	1.06	3	1.38	3	2781.7	1.54	6
$15,000 and over	4.74	9	3520.8	2.20	2	3.06	2	1.45	2	2.36	2	1997.8	1.25	11
Overall	5.42	3	13536.0	1.31	3-4	1.61	3-4	1.08	3	1.40	3	17359.0	1.68	5

Table 8 (continued)

Income Brackets	(18) Property Tax ÷ A.G.I. Minus Federal Tax		(19) Property Tax ÷ Broadened Income		(20) Property Tax ÷ Broadened Income Minus Federal Tax		(21) Insurance Tax	(22) Insurance Tax ÷ A.G.I.	(23) Insurance Tax ÷ A.G.I. Minus Federal Tax	(24) Insurance Tax ÷ Broadened Income	(25) Insurance Tax ÷ Broadened Income Minus Federal Tax
	Extensive Shifting Assumption		Extensive Shifting Assumption		Extensive Shifting Assumption		No Shifting (Thousands of Dollars)	Conservative Shifting Assumption	Conservative Shifting Assumption	Conservative Shifting Assumption	Conservative Shifting Assumption
	Percent	Rank	Percent	Rank	Percent	Rank		Percent	Percent	Percent	Percent
Under $ 2,000	6.88	1	3.82	1	4.92	1	138.8	0.35	0.12	0.07	0.09
$ 2,000 - $ 2,999	3.17	2	1.73	3	2.09	4	91.3	----	----	----	----
$ 3,000 - $ 3,999	2.45	5	1.62	4	2.01	5	136.9	----	----	----	----
$ 4,000 - $ 4,999	2.27	6	1.58	6	1.99	6-7	148.1	----	----	----	----
$ 5,000 - $ 5,999	2.15	7	1.60	5	1.99	6-7	151.7	----	----	----	----
$ 6,000 - $ 6,999	1.95	9	1.43	10	1.81	10	156.0	----	----	----	----
$ 7,000 - $ 7,999	2.06	8	1.50	7-8	1.91	8	132.1	----	----	----	----
$ 8,000 - $ 8,999	1.80	11	1.37	11	1.73	11	112.4	----	----	----	----
$ 9,000 - $ 9,999	1.94	10	1.46	9	1.85	9	93.4	----	----	----	----
$10,000 - $14,999	2.46	4	1.75	2	2.34	3	344.0	----	----	----	----
$15,000 and over	3.04	3	1.50	7-8	2.35	2	211.2	----	----	----	----
Overall	2.51	4	1.66	3-4	2.19	3-4	1716.0	0.16	0.20	0.14	0.18
After Adjustment											
Under $ 2,000	6.73	1	3.73	1	4.78	1	138.8	0.35	0.12	0.07	0.09
$ 2,000 - $ 2,999	3.01	2	1.13	10	1.40	10	91.3	----	----	----	----
$ 3,000 - $ 3,999	2.30	3	1.52	3	1.89	4	136.9	----	----	----	----
$ 4,000 - $ 4,999	2.12	4	1.48	4	1.86	5	148.1	----	----	----	----
$ 5,000 - $ 5,999	2.05	5	1.53	2	1.90	2-3	151.7	----	----	----	----
$ 6,000 - $ 6,999	1.72	9-10	1.26	8	1.59	8	156.0	----	----	----	----
$ 7,000 - $ 7,999	1.78	8	1.30	6-7	1.65	6	132.1	----	----	----	----
$ 8,000 - $ 8,999	1.58	11	1.20	9	1.52	9	112.4	----	----	----	----
$ 9,000 - $ 9,999	1.72	9-10	1.30	6-7	1.64	7	93.4	----	----	----	----
$10,000 - $14,999	1.99	6	1.42	5	1.90	2-3	344.0	----	----	----	----
$15,000 and over	1.79	7	.88	11	1.38	11	211.2	----	----	----	----
Overall	2.13	4	1.41	5	1.86	5	1716.0	0.16	0.20	0.14	0.18

Table 8 (continued)

Income Brackets	(26) Insurance Tax ÷ A.G.I. Minus Federal Tax — Extensive Shifting Assumption	(27) Insurance Tax ÷ Broadened Income — Extensive Shifting Assumption	(28) Insurance Tax ÷ Broadened Income Minus Federal Tax — Extensive Shifting Assumption	(29) Fuel Tax — Conservative Shifting Assumption	(30) Fuel Tax ÷ A.G.I. — Conservative Shifting Assumption		(31) Fuel Tax ÷ A.G.I. Minus Federal Tax — Conservative Shifting Assumption		(32) Fuel Tax ÷ Broadened Income — Conservative Shifting Assumption		(33) Fuel Tax ÷ Broadened Income Minus Federal Tax — Conservative Shifting Assumption	
	Percent	Percent	Percent	(Thousands of Dollars)	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank
Under $ 2,000	0.13	0.07	0.09	388.4	0.98	11	1.20	10-11	0.71	11	0.87	11
$ 2,000 - $ 2,999	----	----	----	560.4	1.16	8	1.40	8	0.79	10	0.93	10
$ 3,000 - $ 3,999	----	----	----	844.7	1.01	10	1.20	10-11	0.81	9	0.99	9
$ 4,000 - $ 4,999	----	----	----	1139.2	1.26	7	1.51	7	1.08	6-7	1.33	7
$ 5,000 - $ 5,999	----	----	----	1031.0	1.07	9	1.27	9	0.98	8	1.18	8
$ 6,000 - $ 6,999	----	----	----	1521.1	1.49	3	1.77	3-4	1.32	3	1.64	4
$ 7,000 - $ 7,999	----	----	----	1286.5	1.48	4	1.77	3-4	1.31	4	1.65	3
$ 8,000 - $ 8,999	----	----	----	1062.5	1.27	6	1.52	6	1.08	6-7	1.46	6
$ 9,000 - $ 9,999	----	----	----	884.9	1.37	5	1.64	5	1.25	5	1.56	5
$10,000 - $14,999	----	----	----	3528.7	1.96	2	2.43	2	1.77	2	2.31	2
$15,000 and over	----	----	----	7841.6	4.90	1	6.81	1	3.22	1	5.27	1
Overall	0.21	0.14	0.18	20089.1	1.94	2	2.38	2	1.60	2-3	2.08	2-3
After Adjustment												
Under $ 2,000	0.13	0.07	0.09	205.7	0.52	11	0.64	11	0.37	11	0.46	11
$ 2,000 - $ 2,999	----	----	----	407.3	0.84	9	1.02	9	0.57	9	0.68	9-10
$ 3,000 - $ 3,999	----	----	----	582.0	0.69	10	0.83	10	0.56	10	0.68	9-10
$ 4,000 - $ 4,999	----	----	----	885.3	0.98	5	1.18	4-5	0.84	6	1.04	6
$ 5,000 - $ 5,999	----	----	----	874.5	0.91	7	1.08	7	0.83	7	1.00	7
$ 6,000 - $ 6,999	----	----	----	1078.7	1.05	3	1.25	3	0.94	3	1.16	3
$ 7,000 - $ 7,999	----	----	----	858.0	0.99	4	1.18	4-5	0.88	4	1.10	4
$ 8,000 - $ 8,999	----	----	----	719.4	0.86	8	1.03	8	0.79	8	0.99	8
$ 9,000 - $ 9,999	----	----	----	607.0	0.94	6	1.12	6	0.86	5	1.07	5
$10,000 - $14,999	----	----	----	2313.7	1.28	2	1.59	2	1.16	2	1.52	2
$15,000 and over	----	----	----	3414.6	2.13	1	2.96	1	1.40	1	2.29	1
Overall	0.21	0.14	0.18	11946.0	1.15	2-3	1.42	2-3	0.95	3	1.24	2-3

Table 8 (continued)

Income Brackets	(34) Fuel Tax	(35) Fuel Tax ÷ A.G.I.		(36) Fuel Tax ÷ A.G.I. Minus Federal Tax		(37) Fuel Tax ÷ Broadened Income		(38) Fuel Tax ÷ Broadened Income Minus Federal Tax		(39) Public Utility Tax	(40) Public Utility Tax ÷ A.G.I.		(41) Public Utility Tax ÷ A.G.I. Minus Federal Tax	
	Extensive Shifting Assumption	Extensive Shifting Assumption		Extensive Shifting Assumption		Extensive Shifting Assumption		Extensive Shifting Assumption		Conservative Shifting Assumption	Conservative Shifting Assumption		Conservative Shifting Assumption	
	(Thousands of Dollars)	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	(Thousands of Dollars)	Percent	Rank	Percent	Rank
Under $ 2,000	856.9	2.17	1	2.85	1	1.58	2	2.15	2	307.5	0.78	2	0.95	2
$ 2,000 - $ 2,999	774.5	1.60	6	2.01	5	1.10	10	1.32	11	140.2	0.29	5-6	0.35	5
$ 3,000 - $ 3,999	1184.6	1.41	9	1.74	10	1.15	9	1.43	10	177.0	0.21	11	0.25	11
$ 4,000 - $ 4,999	1530.0	1.69	4	2.10	3-4	1.46	4-5	1.84	5	206.7	0.23	10	0.27	10
$ 5,000 - $ 5,999	1509.9	1.57	7	1.92	7	1.43	6	1.78	6	227.4	0.24	9	0.28	9
$ 6,000 - $ 6,999	1756.0	1.72	3	2.10	3-4	1.54	3	1.95	3	283.5	0.28	7	0.32	7
$ 7,000 - $ 7,999	1413.2	1.63	5	2.00	6	1.46	4-5	1.86	4	262.7	0.30	4	0.36	4
$ 8,000 - $ 8,999	1147.9	1.38	10	1.68	11	1.28	8	1.62	8	219.6	0.26	8	0.31	8
$ 9,000 - $ 9,999	953.3	1.48	8	1.82	9	1.37	7	1.73	7	181.2	0.29	5-6	0.34	6
$10,000 - $14,999	3542.3	1.97	2	2.54	2	1.81	1	2.42	1	602.6	0.33	3	0.42	3
$15,000 and over	2120.1	1.32	11	1.90	8	0.94	11	1.47	9	1434.4	0.90	1	1.24	1
Overall	16788.0	1.62	6	2.06	4-5	1.37	7	1.80	5	4043.1	0.39	3	0.48	3
After Adjustment														
Under $ 2,000	851.4	2.16	1	2.83	1	1.57	1	2.01	2	271.2	0.69	1	0.84	1
$ 2,000 - $ 2,999	747.9	1.55	5	1.94	4	1.06	10	1.28	10	116.6	0.24	3-4	0.29	4
$ 3,000 - $ 3,999	1145.0	1.36	9	1.68	8-9	1.11	9	1.38	9	128.6	0.15	11	0.18	11
$ 4,000 - $ 4,999	1459.9	1.61	3	2.00	3	1.40	4	1.76	4	167.4	0.18	10	0.22	10
$ 5,000 - $ 5,999	1454.8	1.52	6	1.85	6	1.38	5	1.71	5	213.4	0.22	5-6	0.26	5-6
$ 6,000 - $ 6,999	1602.2	1.57	4	1.92	5	1.41	3	1.78	3	213.2	0.21	7-8	0.25	7-8
$ 7,000 - $ 7,999	1275.6	1.47	7	1.81	7	1.32	6	1.68	6	191.3	0.22	5-6	0.26	5-6
$ 8,000 - $ 8,999	1046.4	1.25	10	1.53	10	1.16	8	1.47	8	164.6	0.20	9	0.23	9
$ 9,000 - $ 9,999	880.9	1.37	8	1.68	8-9	1.27	7	1.60	7	136.3	0.21	7-8	0.25	7-8
$10,000 - $14,999	2993.6	1.66	2	2.14	2	1.53	2	2.04	1	437.4	0.24	3-4	0.30	3
$15,000 and over	1548.9	0.97	11	1.39	11	0.69	11	1.07	11	607.3	0.38	2	0.53	2
Overall	15007.0	1.45	6	1.84	6	1.22	7-8	1.60	7	2647.0	0.26	3	0.31	3

Table 8 (continued)

Income Brackets	(42) Public Utility Tax ÷ Broadened Income — Conservative Shifting Assumption		(43) Public Utility Tax ÷ Broadened Income Minus Federal Tax — Conservative Shifting Assumption		(44) Public Utility Tax — Extensive Shifting Assumption (Thousands of Dollars)	(45) Public Utility Tax ÷ A.G.I. — Extensive Shifting Assumption		(46) Public Utility Tax ÷ A.G.I. Minus Federal Tax — Extensive Shifting Assumption		(47) Public Utility Tax ÷ Broadened Income — Extensive Shifting Assumption		(48) Public Utility Tax ÷ Broadened Income Minus Federal Tax — Extensive Shifting Assumption		(49) Tobacco Tax — No Shifting (Thousands of Dollars)
	Percent	Rank	Percent	Rank		Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	
Under $ 2,000	0.56	2	0.69	2	400.9	1.02	1	1.33	1	0.74	1	1.07	1	25.5
$ 2,000 - $ 2,999	0.20	9-10	0.23	10	202.0	0.42	2	0.52	2-3	0.29	7-9	0.34	10	43.4
$ 3,000 - $ 3,999	0.17	11	0.21	11	251.0	0.30	10-11	0.37	11	0.24	10	0.30	11	202.0
$ 4,000 - $ 4,999	0.20	9-10	0.24	9	305.4	0.34	5-7	0.42	5-8	0.29	7-9	0.37	8	234.2
$ 5,000 - $ 5,999	0.22	8	0.26	8	366.1	0.38	4	0.46	4	0.35	3	0.43	4	227.2
$ 6,000 - $ 6,999	0.24	6-7	0.31	6	346.3	0.34	5-7	0.42	5-8	0.30	6	0.38	6-7	199.2
$ 7,000 - $ 7,999	0.27	4	0.34	4	298.9	0.34	5-7	0.42	5-8	0.31	4-5	0.52	2	159.5
$ 8,000 - $ 8,999	0.24	6-7	0.30	7	258.6	0.31	9	0.38	10	0.29	7-9	0.36	9	129.2
$ 9,000 - $ 9,999	0.26	5	0.32	5	214.6	0.33	8	0.41	9	0.31	4-5	0.39	5	107.3
$10,000 - $14,999	0.30	3	0.40	3	726.5	0.40	3	0.52	2-3	0.37	2	0.50	3	367.8
$15,000 and over	0.59	1	0.96	1	473.8	0.30	10-11	0.42	5-8	0.21	11	0.38	6-7	210.4
Overall	0.32	3	0.42	3	3844.0	0.37	4	0.47	4	0.31	4-5	0.41	5	1906.0
After Adjustment														
Under $ 2,000	0.49	2	0.61	1	400.9	1.02	1	1.33	1	0.74	1	1.07	1	25.5
$ 2,000 - $ 2,999	0.16	9-10	0.19	10	202.0	0.42	2	0.52	2-3	0.29	7-9	0.34	10	43.4
$ 3,000 - $ 3,999	0.12	11	0.15	11	251.0	0.30	10-11	0.37	11	0.24	10	0.30	11	202.0
$ 4,000 - $ 4,999	0.16	9-10	0.20	9	305.4	0.34	5-7	0.42	5-8	0.29	7-9	0.37	8	234.2
$ 5,000 - $ 5,999	0.20	5-6	0.24	5-7	366.1	0.38	4	0.46	4	0.35	3	0.43	4	227.2
$ 6,000 - $ 6,999	0.78	1	0.35	3	346.3	0.34	5-7	0.42	5-8	0.30	6	0.38	6-7	199.2
$ 7,000 - $ 7,999	0.20	5-6	0.24	5-7	298.9	0.34	5-7	0.42	5-8	0.31	4-5	0.52	2	159.5
$ 8,000 - $ 8,999	0.18	8	0.22	8	258.6	0.31	9	0.38	10	0.29	7-9	0.36	9	129.2
$ 9,000 - $ 9,999	0.19	7	0.24	5-7	214.6	0.33	8	0.41	9	0.31	4-5	0.39	5	107.3
$10,000 - $14,999	0.22	4	0.29	4	726.5	0.40	3	0.52	2-3	0.37	2	0.50	3	367.8
$15,000 and over	0.25	3	0.41	2	473.8	0.30	10-11	0.42	5-8	0.21	11	0.38	6-7	210.4
Overall	0.21	4	0.27	4	3844.0	0.37	4	0.47	4	0.31	4-5	0.41	5	1906.0

Table 8 (continued)

Income Brackets	(50) Tobacco Tax ÷ A.G.I.		(51) Tobacco Tax ÷ A.G.I. Minus Federal Tax		(52) Tobacco Tax ÷ Broadened Income		(53) Tobacco Tax ÷ Broadened Income Minus Federal Tax		(54) Tobacco Tax ÷ A.G.I. Minus Federal Tax		(55) Tobacco Tax ÷ Broadened Income		(56) Tobacco Tax ÷ Broadened Income Minus Federal Tax		(57) Bank Tax	(58) Bank Tax ÷ A.G.I.
	Conservative Shifting Assumption		Conservative Shifting Assumption		Conservative Shifting Assumption		Conservative Shifting Assumption		Extensive Shifting Assumption		Extensive Shifting Assumption		Extensive Shifting Assumption		Conservative Shifting Assumption	Conservative Shifting Assumption
	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	(Thousands of Dollars)	Percent
Under $ 2,000	0.06	11	0.08	11	0.05	11	0.06	11	0.08	11	0.05	11	0.06	11	14.1	----
$ 2,000 - $ 2,999	0.09	10	0.11	10	0.06	10	0.07	10	0.11	10	0.06	10	0.07	10	9.2	----
$ 3,000 - $ 3,999	0.24	2-3	0.29	2	0.19	3	0.24	3-4	0.30	2	0.20	3	0.24	4	18.9	----
$ 4,000 - $ 4,999	0.26	1	0.31	1	0.22	1-2	0.27	1	0.32	1	0.22	1-2	0.28	1	15.3	----
$ 5,000 - $ 5,999	0.24	2-3	0.28	3	0.22	1-2	0.26	2	0.29	3	0.22	1-2	0.27	2	5.4	----
$ 6,000 - $ 6,999	0.19	5	0.23	5	0.17	5	0.22	5	0.24	5	0.18	5	0.22	5	27.4	----
$ 7,000 - $ 7,999	0.18	6	0.22	6	0.16	6	0.20	6	0.22	6	0.16	6	0.21	6	27.8	----
$ 8,000 - $ 8,999	0.15	8	0.18	8-9	0.14	8	0.18	8	0.19	8-9	0.14	8	0.18	8	21.4	----
$ 9,000 - $ 9,999	0.17	7	0.20	7	0.15	7	0.19	7	0.20	7	0.15	7	0.20	7	17.5	----
$10,000 - $14,999	0.20	4	0.25	4	0.18	4	0.24	3-4	0.26	4	0.19	4	0.25	3	64.4	0.04
$15,000 and over	0.13	9	0.18	8-9	0.09	9	0.14	9	0.19	8-9	0.09	9	0.14	9	322.4	0.20
Overall	0.18	6	0.23	5	0.15	7	0.20	6	0.23	5-6	0.16	6	0.20	7	544.0	0.05
After Adjustment																
Under $ 2,000	0.06	11	0.08	11	0.05	11	0.06	11	0.08	11	0.05	11	0.06	11	4.2	----
$ 2,000 - $ 2,999	0.09	10	0.11	10	0.06	10	0.07	10	0.11	10	0.06	10	0.07	10	2.2	----
$ 3,000 - $ 3,999	0.24	2-3	0.29	2	0.19	3	0.24	3-4	0.30	2	0.20	3	0.24	4	5.6	----
$ 4,000 - $ 4,999	0.26	1	0.31	1	0.22	1-2	0.27	1	0.32	1	0.22	1-2	0.28	1	4.6	----
$ 5,000 - $ 5,999	0.24	2-3	0.28	3	0.22	1-2	0.26	2	0.29	3	0.22	1-2	0.27	2	1.6	----
$ 6,000 - $ 6,999	0.19	5	0.23	5	0.17	5	0.22	5	0.24	5	0.18	5	0.22	5	8.2	----
$ 7,000 - $ 7,999	0.18	6	0.22	6	0.16	6	0.20	6	0.22	6	0.16	6	0.21	6	8.4	----
$ 8,000 - $ 8,999	0.15	8	0.18	8-9	0.14	8	0.18	8	0.19	8-9	0.14	8	0.18	8	6.4	----
$ 9,000 - $ 9,999	0.17	7	0.20	7	0.15	7	0.19	7	0.20	7	0.15	7	0.20	7	5.2	----
$10,000 - $14,999	0.20	4	0.25	4	0.18	4	0.24	3-4	0.26	4	0.19	4	0.25	3	19.3	----
$15,000 and over	0.13	9	0.18	8-9	0.09	9	0.14	9	0.19	8-9	0.09	9	0.14	9	96.7	0.06
Overall	0.18	6	0.23	5	0.15	7	0.20	6	0.23	5-6	0.16	6	0.20	7	163.0	----

Table 8 (continued)

Income Brackets	(59) Bank Tax ÷ A.G.I. Minus Federal Tax	(60) Bank Tax ÷ Broadened Income	(61) Bank Tax ÷ Broadened Income Minus Federal Tax	(62) Bank Tax	(63) Bank Tax ÷ A.G.I.	(64) Bank Tax ÷ A.G.I. Minus Federal Tax	(65) Bank Tax ÷ Broadened Income	(66) Bank Tax ÷ Broadened Income Minus Federal Tax	(67) Corporate Income Tax ÷
	Conservative Shifting Assumption	Conservative Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption	Extensive Shifting Assumption	Extensive Shifting Assumption	Extensive Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption
	Percent	Percent	Percent	(Thousands of Dollars)	Percent	Percent	Percent	Percent	(Thousands of Dollars)
Under $ 2,000	----	----	----	24.0	----	----	----	----	131.8
$ 2,000 - $ 2,999	----	----	----	15.7	----	----	----	----	85.6
$ 3,000 - $ 3,999	----	----	----	27.0	----	----	----	----	175.8
$ 4,000 - $ 4,999	----	----	----	25.8	----	----	----	----	142.9
$ 5,000 - $ 5,999	----	----	----	19.6	----	----	----	----	50.7
$ 6,000 - $ 6,999	----	----	----	34.7	----	----	----	----	255.4
$ 7,000 - $ 7,999	----	----	----	32.5	----	----	----	----	259.5
$ 8,000 - $ 8,999	----	----	----	26.1	----	----	----	----	199.7
$ 9,000 - $ 9,999	----	----	----	21.5	----	----	----	----	163.2
$10,000 - $ 14,999	0.04	0.03	0.04	79.3	0.04	0.06	0.04	0.05	600.0
$15,000 and over	0.28	0.13	0.22	237.4	0.15	0.21	0.10	0.16	3003.3
Overall	0.06	0.04	0.06	544.0	0.05	0.07	0.04	0.06	5068.0
After Adjustment									
Under $ 2,000	----	----	----	17.4	----	----	----	----	29.1
$ 2,000 - $ 2,999	----	----	----	11.4	----	----	----	----	18.9
$ 3,000 - $ 3,999	----	----	----	18.2	----	----	----	----	38.8
$ 4,000 - $ 4,999	----	----	----	18.6	----	----	----	----	31.8
$ 5,000 - $ 5,999	----	----	----	17.1	----	----	----	----	11.2
$ 6,000 - $ 6,999	----	----	----	21.9	----	----	----	----	56.4
$ 7,000 - $ 7,999	----	----	----	19.5	----	----	----	----	57.3
$ 8,000 - $ 8,999	----	----	----	16.1	----	----	----	----	44.1
$ 9,000 - $ 9,999	----	----	----	13.3	----	----	----	----	36.1
$10,000 - $14,999	----	----	----	49.2	----	----	----	----	132.6
$15,000 and over	0.08	0.04	0.06	86.7	0.05	0.08	0.04	0.06	663.7
Overall	----	----	----	289.0	0.03	0.04	0.02	0.03	1120.0

Table 8 (continued)

Income Brackets	(68) Corporate Income Tax ÷ A.G.I.		(69) Corporate Income Tax ÷ A.G.I. Minus Federal Tax		(70) Corporate Income Tax ÷ Broadened Income		(71) Corporate Income Tax ÷ Broadened Income Minus Federal Tax		(72) Corporate Income Tax	(73) Corporate Income Tax ÷ A.G.I.		(74) Corporate Income Tax ÷ A.G.I. Minus Federal Tax		(75) Corporate Income Tax ÷ Broadened Income		(76) Corporate Income Tax ÷ Broadened Income Minus Federal Tax	
	Conservative Shifting Assumption		Conservative Shifting Assumption		Conservative Shifting Assumption		Conservative Shifting Assumption		Extensive Shifting Assumption	Extensive Shifting Assumption		Extensive Shifting Assumption		Extensive Shifting Assumption		Extensive Shifting Assumption	
	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	(Thousands of Dollars)	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank
Under $ 2,000	0.33	2-3	0.41	3-4	0.24	4	0.29	4-5	224.5	0.57	2	0.75	2	0.41	2	0.53	2
$ 2,000 - $ 2,999	0.18	9	0.21	10	0.12	10	0.14	10	146.9	0.30	7-8	0.38	6-7	0.21	10	0.25	10
$ 3,000 - $ 3,999	0.21	8	0.25	9	0.17	8	0.21	8	252.0	0.30	7-8	0.37	8	0.24	8	0.30	8
$ 4,000 - $ 4,999	0.16	10	0.79	2	0.14	9	0.17	9	241.0	0.27	10	0.33	10	0.23	9	0.29	9
$ 5,000 - $ 5,999	0.05	11	0.06	11	0.05	11	0.06	11	183.0	0.19	11	0.23	11	0.17	11	0.22	11
$ 6,000 - $ 6,999	0.25	5-6	0.30	6-7	0.22	6-7	0.28	6	323.8	0.32	5	0.39	5	0.28	7	0.36	5-6
$ 7,000 - $ 7,999	0.30	4	0.36	5	0.26	3	0.33	3	303.0	0.35	4	0.43	4	0.31	4	0.40	4
$ 8,000 - $ 8,999	0.24	7	0.28	8	0.22	6-7	0.27	7	243.8	0.29	9	0.36	9	0.27	6	0.34	7
$ 9,000 - $ 9,999	0.25	5-6	0.30	6-7	0.23	5	0.29	4-5	200.6	0.31	6	0.38	6-7	0.29	5	0.36	5-6
$10,000 - $14,999	0.33	2-3	0.41	3-4	0.30	2	0.39	2	738.6	0.41	3	0.53	3	0.38	3	0.50	3
$15,000 and over	1.88	1	2.61	1	1.23	1	2.02	1	2210.8	1.38	1	1.98	1	0.98	1	1.53	1
Overall	0.49	1-2	0.60	2-3	0.40	1-2	0.66	1-2	5068.0	0.49	2-3	0.62	2-3	0.41	2	0.54	2
After Adjustment																	
Under $ 2,000	0.07	2-3	0.09	2-3	0.05	3	0.06	3	156.0	0.40	2	0.52	2	0.29	1-2	0.37	2
$ 2,000 - $ 2,999	0.04	5	0.05	5	0.03	5	0.03	5	102.4	0.21	4	0.26	4	0.14	11	0.17	11
$ 3,000 - $ 3,999	0.05	4	0.06	4	0.04	4	0.04	4	160.6	0.19	5-7	0.24	5-6	0.16	7-9	0.19	9
$ 4,000 - $ 4,999	----	--	----	--	----	--	----	--	166.8	0.18	8-9	0.23	7-8	0.16	7-9	0.20	7-8
$ 5,000 - $ 5,999	----	--	----	--	----	--	----	--	156.7	0.16	11	0.20	10-11	0.15	10	0.18	10
$ 6,000 - $ 6,999	----	--	----	--	----	--	----	--	191.0	0.19	5-7	0.23	7-8	0.17	4-6	0.21	5-6
$ 7,000 - $ 7,999	----	--	----	--	----	--	----	--	168.2	0.19	5-7	0.24	5-6	0.17	4-6	0.22	4
$ 8,000 - $ 8,999	----	--	----	--	----	--	----	--	140.0	0.17	10	0.20	10-11	0.16	7-9	0.20	7-8
$ 9,000 - $ 9,999	----	--	----	--	----	--	----	--	115.8	0.18	8-9	0.22	9	0.17	4-6	0.21	5-6
$10,000 - $14,999	0.07	2-3	0.09	2-3	0.07	2	0.09	2	426.8	0.24	3	0.30	3	0.22	3	0.29	3
$15,000 and over	0.41	1	0.58	1	0.27	1	0.44	1	650.5	0.41	1	0.58	1	0.29	1-2	0.45	1
Overall	0.11	2	0.13	2	0.09	2	0.12	2	2435.0	0.24	3	0.30	3	0.20	3-4	0.26	3-4

Table 8 (continued)

Income Brackets	(77) Liquor Tax	(78) Liquor Tax ÷ A.G.I.		(79) Liquor Tax ÷ A.G.I. Minus Federal Tax		(80) Liquor Tax ÷ Broadened Income		(81) Liquor Tax ÷ Broadened Income Minus Federal Tax		(82) Liquor Tax ÷ A.G.I. Minus Federal Tax		(83) Liquor Tax ÷ Broadened Income		(84) Liquor Tax ÷ Broadened Income Minus Federal Tax		(85) Personal Income Tax
	No Shifting	Conservative Shifting Assumption		Conservative Shifting Assumption		Conservative Shifting Assumption		Conservative Shifting Assumption		Extensive Shifting Assumption		Extensive Shifting Assumption		Extensive Shifting Assumption		No Shifting
	(Thousands of Dollars)	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	(Thousands of Dollars)
Under $ 2,000	-----	----	11	----	11	----	11	----	11	----	11	----	11	----	11	509.3
$ 2,000 - $ 2,999	82.0	0.17	10	0.20	10	0.12	10	0.14	10	0.21	10	0.12	10	0.14	10	976.6
$ 3,000 - $ 3,999	320.4	0.38	2	0.46	2	0.31	3	0.38	2-3	0.47	2	0.31	2-3	0.39	3	1883.5
$ 4,000 - $ 4,999	582.6	0.64	1	0.77	1	0.55	2	0.68	1	0.80	1	0.56	1	0.70	1	2107.5
$ 5,000 - $ 5,999	321.9	0.34	3	0.40	3-5	0.30	4	0.37	4	0.41	5	0.31	2-3	0.38	4	2377.3
$ 6,000 - $ 6,999	204.7	0.20	8-9	0.24	8-9	0.18	9	0.22	9	0.25	8-9	0.18	10	0.23	8	2637.1
$ 7,000 - $ 7,999	188.2	0.22	6-7	0.26	6-7	0.79	1	0.24	7-8	0.27	6-7	0.20	6-8	0.16	9	2239.1
$ 8,000 - $ 8,999	171.7	0.20	8-9	0.24	8-9	0.19	7-8	0.24	7-8	0.25	8-9	0.19	9	0.24	7	2383.5
$ 9,000 - $ 9,999	142.3	0.22	6-7	0.26	6-7	0.20	6	0.25	6	0.27	6-7	0.20	6-8	0.26	6	1839.5
$10,000 - $14,999	582.0	0.32	4	0.40	3-5	0.29	5	0.38	2-3	0.42	3-4	0.30	4-5	0.40	2	5932.4
$15,000 and over	464.2	0.29	5	0.40	3-5	0.19	7-8	0.31	5	0.42	3-4	0.20	6-8	0.32	5	6984.7
Overall	3060.0	0.30	4-5	0.36	5-6	0.24	5-6	0.32	5	0.38	5-6	0.25	5-6	0.33	5	29871.0
After Adjustment																
Under $ 2,000	-----	----	11	----	11	----	11	----	11	----	11	----	11	----	11	506.1
$ 2,000 - $ 2,999	82.0	0.17	10	0.20	10	0.12	10	0.14	10	0.21	10	0.12	10	0.14	10	943.1
$ 3,000 - $ 3,999	320.4	0.38	2	0.46	2	0.31	3	0.38	2-3	0.47	2	0.31	2-3	0.39	3	1820.6
$ 4,000 - $ 4,999	582.6	0.64	1	0.77	1	0.55	2	0.68	1	0.80	1	0.56	1	0.70	1	2011.0
$ 5,000 - $ 5,999	321.9	0.34	3	0.40	3-5	0.30	4	0.37	4	0.41	5	0.31	2-3	0.38	4	2290.5
$ 6,000 - $ 6,999	204.7	0.20	8-9	0.24	8-9	0.18	9	0.22	9	0.25	8-9	0.18	10	0.23	8	2406.1
$ 7,000 - $ 7,999	188.2	0.22	6-7	0.26	6-7	0.79	1	0.24	7-8	0.27	6-7	0.20	6-8	0.16	9	2021.0
$ 8,000 - $ 8,999	171.7	0.20	8-9	0.24	8-9	0.19	7-8	0.24	7-8	0.25	8-9	0.19	9	0.24	7	2172.8
$ 9,000 - $ 9,999	142.3	0.22	6-7	0.26	6-7	0.20	6	0.25	6	0.27	6-7	0.20	6-8	0.26	6	1699.9
$10,000 - $14,999	582.0	0.32	4	0.40	3-5	0.29	5	0.38	2-3	0.42	3-4	0.30	4-5	0.40	2	5013.5
$15,000 and over	464.2	0.29	5	0.40	3-5	0.19	7-8	0.31	5	0.42	3-4	0.20	6-8	0.32	5	5103.0
Overall	3060.0	0.30	4-5	0.36	5-6	0.24	5-6	0.32	5	0.38	5-6	0.25	5-6	0.33	5	25988.0

Table 8 (continued)

Income Brackets	(86) Personal Income Tax ÷ A.G.I.		(87) Personal Income Tax ÷ A.G.I. Minus Federal Tax		(88) Personal Income Tax ÷ Broadened Income		(89) Personal Income Tax ÷ Broadened Income Minus Federal Tax		(90) Personal Income Tax ÷ A.G.I. Minus Federal Tax		(91) Personal Income Tax ÷ Broadened Income		(92) Personal Income Tax ÷ Broadened Income Minus Federal Tax		(93) Estates And Inheritance Tax	(94) Estates And Inheritance Tax ÷ A.G.I.
	Conservative Shifting Assumption		Conservative Shifting Assumption		Conservative Shifting Assumption		Conservative Shifting Assumption		Extensive Shifting Assumption		Extensive Shifting Assumption		Extensive Shifting Assumption		No Shifting (Thousands of Dollars)	Conservative Shifting Assumption
	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank		Percent
Under $ 2,000	1.29	9	1.57	11	0.92	11	1.14	11	1.69	11	0.94	11	1.20	11	-----	----
$ 2,000 - $ 2,999	2.02	11	2.44	9	1.38	10	1.62	10	2.53	10	1.38	10	1.67	10	-----	----
$ 3,000 - $ 3,999	2.24	10	2.68	8	1.81	9	2.21	9	2.77	9	1.83	9	2.28	9	-----	----
$ 4,000 - $ 4,999	2.33	8	2.21	10	2.00	8	2.46	8	2.89	8	2.01	8	2.54	8	-----	----
$ 5,000 - $ 5,999	2.48	7	2.93	7	2.25	7	2.72	7	3.02	7	2.26	7	2.80	7	-----	----
$ 6,000 - $ 6,999	2.58	5-6	3.07	6	2.29	5	2.85	6	3.16	6	2.32	5-6	2.93	6	-----	----
$ 7,000 - $ 7,999	2.58	5-6	3.08	5	2.28	6	2.86	5	3.17	5	2.32	5-6	2.95	5	-----	----
$ 8,000 - $ 8,999	2.86	3-4	3.40	3-4	2.62	3	3.27	3	3.49	4	2.66	3	3.36	3	-----	----
$ 9,000 - $ 9,999	2.86	3-4	3.40	3-4	2.61	4	3.25	4	3.50	3	2.64	4	3.35	4	-----	----
$10,000 - $14,999	3.30	2	4.09	2	2.98	1	3.89	2	4.25	2	3.03	2	4.04	2	440.1	0.24
$15,000 and over	4.36	1	6.06	1	2.87	2	4.69	1	6.25	1	3.10	1	4.84	1	202.9	0.13
Overall	2.88	3	3.55	2-3	2.37	4-5	3.10	4-5	3.67	2-3	2.43	4-5	3.20	4-5	643.0	0.06
After Adjustment																
Under $ 2,000	1.28	11	1.56	10	0.92	11	1.13	11	1.68	11	0.93	11	1.20	11	-----	----
$ 2,000 - $ 2,999	1.96	10	2.36	11	1.33	10	1.57	10	2.45	10	1.34	10	1.61	10	-----	----
$ 3,000 - $ 3,999	2.17	9	2.59	9	1.75	9	2.14	9	2.68	9	1.77	9	2.20	9	-----	----
$ 4,000 - $ 4,999	2.22	8	2.67	8	1.91	8	2.35	8	2.76	8	1.92	8	2.42	8	-----	----
$ 5,000 - $ 5,999	2.39	5	2.82	5	2.17	4	2.62	5	2.91	5	2.18	5	2.69	5	-----	----
$ 6,000 - $ 6,999	2.35	6	2.80	6	2.09	6	2.60	6	2.88	6	2.12	6	2.68	6	-----	----
$ 7,000 - $ 7,999	2.33	7	2.78	7	2.06	7	2.58	7	2.86	7	2.09	7	2.66	7	-----	----
$ 8,000 - $ 8,999	2.60	4	3.10	4	2.39	3	2.98	4	3.18	4	2.42	3	3.06	4	-----	----
$ 9,000 - $ 9,999	2.64	3	3.15	3	2.41	2	3.01	3	3.24	3	2.44	2	3.09	3	-----	----
$10,000 - $14,999	2.78	2	3.45	2	2.52	1	3.29	2	3.59	2	2.56	1	3.42	2	440.1	0.24
$15,000 and over	3.19	1	4.43	1	2.10	5	3.43	1	4.57	1	2.26	4	3.54	1	202.9	0.13
Overall	2.51	4-5	3.09	4	2.06	7	2.69	5	3.19	4	2.12	6	2.78	4-5	643.0	0.06

Table 8 (continued)

Income Brackets	(95) Estates And Inheritance Tax ÷ A.G.I. Minus Federal Tax	(96) Estates And Inheritance Tax ÷ Broadened Income	(97) Estates And Inheritance Tax ÷ Broadened Income Minus Federal Tax	(98) Estates And Inheritance Tax ÷ A.G.I. Minus Federal Tax	(99) Estates And Inheritance Tax ÷ Broadened Income	(100) Estates And Inheritance Tax ÷ Broadened Income Minus Federal Tax
	Conservative Shifting Assumption	Conservative Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption	Extensive Shifting Assumption	Extensive Shifting Assumption
	Percent	Percent	Percent	Percent	Percent	Percent
Under $ 2,000	----	----	----	----	----	----
$ 2,000 - $ 2,999	----	----	----	----	----	----
$ 3,000 - $ 3,999	----	----	----	----	----	----
$ 4,000 - $ 4,999	----	----	----	----	----	----
$ 5,000 - $ 5,999	----	----	----	----	----	----
$ 6,000 - $ 6,999	----	----	----	----	----	----
$ 7,000 - $ 7,999	----	----	----	----	----	----
$ 8,000 - $ 8,999	----	----	----	----	----	----
$ 9,000 - $ 9,999	----	----	----	----	----	----
$10,000 - $14,999	0.30	0.22	0.29	0.32	0.22	0.30
$15,000 and over	0.18	0.08	0.14	0.18	0.09	0.14
Overall	0.08	0.05	0.07	0.08	0.05	0.07
After Adjustment						
Under $ 2,000	-----	----	----	----	----	----
$ 2,000 - $ 2,999	----	----	----	----	----	----
$ 3,000 - $ 3,999	----	----	----	----	----	----
$ 4,000 - $ 4,999	----	----	----	----	----	----
$ 5,000 - $ 5,999	----	----	----	----	----	----
$ 6,000 - $ 6,999	----	----	----	----	----	----
$ 7,000 - $ 7,999	----	----	----	----	----	----
$ 8,000 - $ 8,999	----	----	----	----	----	----
$ 9,000 - $ 9,999	----	----	----	----	----	----
$10,000 - $14,999	0.30	0.22	0.29	0.32	0.22	0.30
$15,000 and over	0.18	0.08	0.14	0.18	0.09	0.14
Overall	0.08	0.05	0.07	0.08	0.05	0.07

Table 8 (continued)

Income Brackets	(101) Unemployment Insurance	(102) Unemployment Insurance ÷ A.G.I.		(103) Unemployment Insurance ÷ A.G.I. Minus Federal Tax		(104) Unemployment Insurance ÷ Broadened Income		(105) Unemployment Insurance ÷ Broadened Income Minus Federal Tax		(106) Unemployment Insurance ÷ A.G.I. Minus Federal Tax		(107) Unemployment Insurance ÷ Broadened Income		(108) Unemployment Insurance ÷ Broadened Income Minus Federal Tax	
	No Shifting (Thousands of Dollars)	Conservative Shifting Assumption		Conservative Shifting Assumption		Conservative Shifting Assumption		Conservative Shifting Assumption		Extensive Shifting Assumption		Extensive Shifting Assumption		Extensive Shifting Assumption	
		Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank
Under $ 2,000	393.2	1.00	4	1.21	4	0.71	4	0.88	4	1.31	4	0.72	4	0.93	4
$ 2,000 - $ 2,999	652.9	1.35	3	1.63	3	0.92	3	1.09	3	1.69	3	0.93	3	1.12	3
$ 3,000 - $ 3,999	1292.5	1.54	2	1.84	2	1.24	2	1.52	2	1.90	2	1.26	2	1.56	2
$ 4,000 - $ 4,999	2009.6	2.22	1	2.67	1	1.91	1	2.35	1	2.76	1	1.92	1	2.42	1
$ 5,000 - $ 5,999	603.0	0.63	5	0.74	5	0.57	5	0.69	5	0.79	5	0.57	5	0.71	5
$ 6,000 - $ 6,999	-----	----	--	----	--	----	--	----	--	----	--	----	--	----	--
$ 7,000 - $ 7,999	-----	----	--	----	--	----	--	----	--	----	--	----	--	----	--
$ 8,000 - $ 8,999	-----	----	--	----	--	----	--	----	--	----	--	----	--	----	--
$ 9,000 - $ 9,999	-----	----	--	----	--	----	--	----	--	----	--	----	--	----	--
$10,000 - $14,999	-----	----	--	----	--	----	--	----	--	----	--	----	--	----	--
$15,000 and over	-----	----	--	----	--	----	--	----	--	----	--	----	--	----	--
Overall	4951.0	0.48	--	0.59	--	0.39	--	0.51	--	0.61	--	0.40	--	0.53	--
After Adjustment															
Under $ 2,000	393.2	1.00	4	1.21	4	0.71	4	0.88	4	1.31	4	0.72	4	0.93	4
$ 2,000 - $ 2,999	652.9	1.35	3	1.63	3	0.92	3	1.09	3	1.69	3	0.93	3	1.12	3
$ 3,000 - $ 3,999	1292.5	1.54	2	1.84	2	1.24	2	1.52	2	1.90	2	1.26	2	1.56	2
$ 4,000 - $ 4,999	2009.6	2.22	1	2.67	1	1.91	1	2.35	1	2.76	1	1.92	1	2.42	1
$ 5,000 - $ 5,999	603.0	0.63	5	0.74	5	0.57	5	0.69	5	0.79	5	0.57	5	0.71	5
$ 6,000 - $ 6,999	-----	----	--	----	--	----	--	----	--	----	--	----	--	----	--
$ 7,000 - $ 7,999	-----	----	--	----	--	----	--	----	--	----	--	----	--	----	--
$ 8,000 - $ 8,999	-----	----	--	----	--	----	--	----	--	----	--	----	--	----	--
$ 9,000 - $ 9,999	-----	----	--	----	--	----	--	----	--	----	--	----	--	----	--
$10,000 - $14,999	-----	----	--	----	--	----	--	----	--	----	--	----	--	----	--
$15,000 and over	-----	----	--	----	--	----	--	----	--	----	--	----	--	----	--
Overall	4951.0	0.48	--	0.59	--	0.39	--	0.51	--	0.61	--	0.40	--	0.53	--

Table 9

Dollar Income Distribution Based on Different Income Concepts

(Thousands of Dollars)

Income Brackets	(1) Adjusted Gross Income[a]	(2) Adjusted Gross Income Minus Federal Taxes[b] Conservative Shifting Assumption	(3) Adjusted Gross Income Minus Federal Taxes[b] Extensive Shifting Assumption	(4) Broadened Income[c] Conservative Shifting Assumption	(5) Broadened Income[c] Extensive Shifting Assumption	(6) Broadened Income Minus Federal Taxes[b] Conservative Shifting Assumption	(7) Broadened Income Minus Federal Taxes[b] Extensive Shifting Assumption
Under $ 2,000	39,464.0	32,375.7	30,076.1	55,014.1	54,238.1	44,700.2	42,351.1
$ 2,000 - $ 2,999	48,237.9	40,030.6	38,549.7	70,980.6	70,476.2	60,064.1	58,551.1
$ 3,000 - $ 3,999	83,946.4	70,238.5	68,017.1	104,017.8	102,982.3	85,066.4	82,779.1
$ 4,000 - $ 4,999	90,435.8	75,338.2	72,932.4	105,476.1	104,634.3	85,483.7	83,024.0
$ 5,000 - $ 5,999	95,948.9	81,054.7	78,587.4	105,565.0	105,266.5	87,503.1	85,016.8
$ 6,000 - $ 6,999	102,299.5	85,960.0	83,414.5	115,264.4	113,760.3	92,545.3	89,904.0
$ 7,000 - $ 7,999	86,863.7	72,753.4	70,601.9	98,015.4	96,487.3	78,152.7	75,903.7
$ 8,000 - $ 8,999	83,433.9	70,075.0	68,247.6	90,923.9	89,749.1	72,937.3	71,036.0
$ 9,000 - $ 9,999	64,393.7	54,022.5	52,505.3	70,526.1	69,565.2	56,549.5	54,971.1
$10,000 - $14,999	179,990.5	145,178.9	139,584.9	199,123.8	195,590.3	152,498.0	146,678.8
$15,000 and over	160,025.0	115,178.8	111,747.5	243,334.2	225,648.2	148,812.1	144,253.3
Total[d]	1,035,039.0	842,206.0	814,264.0	1,258,241.0	1,228,398.0	964,312.0	934,469.0

a/ Source: Table 19.

b/ Source: Table 13.

c/ Source: Table 12.

d/ Columns may not sum to total due to rounding.

Table 10

Percent Income Distribution Based on Different Income Concepts[a/]

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Income Brackets	Adjusted Gross Income	Adjusted Gross Income Minus Federal Taxes		Broadened Income		Broadened Income Minus Federal Taxes	
		Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption
	(Proportion of total)	(Proportion of total)	(Proportion of total)	(Proportion of total)	(Proportion of total)	(Proportion of total)	(Proportion of total)
Under $ 2,000	3.78	3.80	3.68	4.40	4.40	4.65	4.50
$ 2,000 - $ 2,999	4.70	4.75	4.60	5.65	5.70	6.20	6.20
$ 3,000 - $ 3,999	8.10	8.35	8.35	8.30	8.40	8.80	8.90
$ 4,000 - $ 4,999	8.70	8.95	9.00	8.35	8.50	8.80	8.90
$ 5,000 - $ 5,999	9.25	9.65	9.70	8.45	8.50	9.15	9.10
$ 6,000 - $ 6,999	9.85	10.20	10.20	9.15	9.20	9.55	9.65
$ 7,000 - $ 7,999	8.40	8.70	8.75	7.80	7.80	8.10	8.15
$ 8,000 - $ 8,999	8.30	8.35	8.35	7.15	7.30	7.60	7.60
$ 9,000 - $ 9,999	6.20	6.40	6.35	5.60	5.70	5.80	5.90
$10,000 - $14,999	17.40	17.30	17.20	15.80	15.90	15.70	15.70
$15,000 and over	15.40	13.70	13.80	19.50	18.50	15.50	15.60
Total[b/]	100.08	100.15	99.98	100.15	99.80	99.85	100.20

a/ For dollar distribution, see Table 9.

b/ Columns may not sum to total due to rounding.

Table 11

Distribution Of Total Tax And Of Income Based On
Different Income Concepts, Three Income Groups

Income Brackets	(1) Total Tax Conservative Shifting Assumption Without Adjustment[a] (Thousands of Dollars)	(2) Proportion of Total Tax[a] (Percent)	(3) Proportion of A.G.I.[a] (Percent)	(4) Proportion of A.G.I. Minus Federal Taxes[a] (Percent)	(5) Proportion of Broadened Income[a] (Percent)
Under $ 5,000	33557.6	21.94	25.32	25.88	26.66
$ 5,000 - $ 9,999	46545.3	30.44	41.83	43.20	38.17
$10,000 and over	72827.0	47.62	32.85	30.91	35.16
Total[b]	152930.0	100.00	100.00	99.99	99.99
$ 6,000 - $ 9,999	--------	24.14	33.52	33.58	29.78

a/ Compiled from data in Table 7-A.

b/ Columns may not sum to total due to rounding.

Table 11 (continued)

Income Brackets	(6) Proportion of Broadened Income Minus Federal Taxes[a] (Percent)	(7) Total Tax Extensive Shifting Assumption Without Adjustment[c] (Thousands of Dollars)	(8) Proportion of Total Tax[c] (Percent)	(9) Proportion of A.G.I.[c] (Percent)	(10) Proportion of A.G.I. Minus Federal Taxes[c] (Percent)
Under $ 5,000	28.55	40727.9	28.12	25.32	25.74
$ 5,000 - $ 9,999	40.20	51416.7	35.51	41.83	43.40
$10,000 and over	31.25	52662.5	36.37	32.85	30.87
Total[b]	100.00	144807.0	100.00	100.00	100.01
$ 6,000 - $ 9,999	31.13	-------	-----	33.52	33.74

c/ Compiled from data in Table 7-C.

Table 11 (continued)

Income Brackets	(11) Proportion of Broadened Income[c/] (Percent)	(12) Proportion of Broadened Income Minus Federal Taxes[c/] (Percent)	(13) Total Tax Conservative Shifting Assumption with Adjustment[d/] (Thousands of Dollars)	(14) Proportion of Total Tax[d/] (Percent)	(15) Total Tax Extensive Shifting Assumption with Adjustment[e/] (Thousands of Dollars)	(16) Proportion of Total Tax[e/] (Percent)
Under $ 5,000	27.05	28.54	28979.8	26.66	39232.9	30.67
$ 5,000 - $ 9,999	38.65	40.32	37459.8	34.46	47451.3	37.10
$10,000 and over	34.29	31.13	42252.5	38.87	41215.3	32.22
Total[b/]	99.99	99.99	108692.0	99.99	127900.0	99.99
$ 6,000 - $ 9,999	30.08	31.23	------	-----	35718.2[f/]	27.93

d/ Compiled from data in Table 7-B.

e/ Compiled from data in Table 7-D.

f/ Total for $5,000 - $9,999 minus total for $5,000 - $5,999.
47451.3 - 11733.1 = 35718.2.

Table 12

Broadened Income

(Thousands of Dollars)

Income Brackets	(1) A.G.I.[a]	(2) Dividend Distribution[b] (Percent)	(3) Undistributed Corporate Profits[c]	(4) Unshifted Portion of Certain Business Taxes: Federal Corporate Income Tax[d] — Conservative Shifting Assumption[f]	(5) Federal Corporate Income Tax[d] — Extensive Shifting Assumption[g]	(6) State Corporate Income Tax[h] — Conservative Shifting Assumption[f]	(7) State Corporate Income Tax[h] — Extensive Shifting Assumption[g]	(8) State Bank Tax[h] — Conservative Shifting Assumption[f]	(9) State Bank Tax[h] — Extensive Shifting Assumption[g]
Under $ 2,000	39,464.0	2.60	760.5	2,261.2	1,507.5	58.2	38.8	8.5	5.6
$ 2,000 - $ 2,999	48,237.9	1.69	494.3	1,469.8	979.8	37.8	25.2	5.5	3.7
$ 3,000 - $ 3,999	83,946.4	3.47	1,015.0	3,017.8	2,011.9	77.7	51.8	11.3	7.6
$ 4,000 - $ 4,999	90,435.8	2.82	824.8	2,452.6	1,635.0	63.2	42.1	9.2	6.1
$ 5,000 - $ 5,999	95,948.9	1.00	292.5	869.7	579.8	22.4	14.9	3.3	2.2
$ 6,000 - $ 6,999	102,299.5	5.04	1,474.2	4,383.3	2,922.2	112.9	75.3	16.4	11.0
$ 7,000 - $ 7,999	86,863.7	5.12	1,497.6	4,452.9	2,968.6	114.7	76.5	16.7	11.1
$ 8,000 - $ 8,999	83,433.9	3.94	1,152.4	3,426.6	2,284.4	88.3	58.9	12.9	8.6
$ 9,000 - $ 9,999	64,393.7	3.22	941.8	2,800.4	1,867.0	72.1	48.1	10.5	7.0
$10,000 - $14,999	179,990.5	11.84	3,463.2	10,297.2	6,864.8	265.2	176.9	38.6	25.8
$15,000 and over	160,025.0	59.26	17,333.6	51,538.4	34,359.0	1,327.4	885.3	193.4	128.9
Total[e]	1,035,039.0	100.00	29,250.0	86,970.0	57,980.0	2,240.0	1,494.0	326.0	218.0

a/ Source: Table 19.

b/ Individual entries of columns 3 through 12 are the result of applying the percent of column 2 to the respective column totals.

c/ See text, Chapter 2, page 23.

d/ See text, Chapter 2, page 23.

e/ Columns may not sum to total due to rounding.

f/ Zero forward shifting.

g/ Each entry in this column is 2/3 of the corresponding entry of the previous column so as to allow for 1/3 forward shifting. See text, Chapter 2, pages 23 and 24.

h/ Source: Table 30.

Table 12 (continued)

Income Brackets	(10) Employer Contribution to Social Security i/	(11) Unemployment Insurance j/	(12) Transfer Payments k/	(13) Undistributed Fiduciary Income l/	(14) Total Conservative Shifting Assumption (1) + (3) + (4) + (6) + (8) + (10) + (11) + (12) + (13)	(15) Total Extensive Shifting Assumption (1) + (3) + (5) + (7) + (9) + (10) + (11) + (12) + (13)
Under $ 2,000	1,046.1	393.8	10,400.0	622.4	55,014.1	54,238.1
$ 2,000 - $ 2,999	1,292.5	653.5	18,200.0	589.8	70,980.6	70,476.2
$ 3,000 - $ 3,999	2,334.7	1,292.6	11,700.0	622.4	104,017.8	102,982.3
$ 4,000 - $ 4,999	2,530.9	2,009.6	7,150.0	--	105,476.1	104,634.3
$ 5,000 - $ 5,999	2,329.4	603.0	5,200.0	295.8	105,565.0	105,266.5
$ 6,000 - $ 6,999	2,154.7	--	3,900.0	923.4	115,264.4	113,760.3
$ 7,000 - $ 7,999	1,460.5	--	2,600.0	1,009.3	98,015.4	96,487.3
$ 8,000 - $ 8,999	1,325.9	--	1,300.0	184.0	90,923.9	89,749.1
$ 9,000 - $ 9,999	906.2	--	1,300.0	101.4	70,526.1	69,565.2
$10,000 - $14,999	1,889.1	--	2,150.0	1,030.0	199,123.8	195,590.3
$15,000 and over	--	--	1,100.0	11,816.4	243,334.2	225,648.2
Total	17,270.0	4,951.0	65,000.0	17,195.0	1,258,241.0	1,228,398.0

i/ Source: Table 52.

j/ Source: Table 53.

k/ See text, Chapter 2, page 22.

l/ Allocated according to source distribution of Estate and Trust income as given in Statistics of Income, Fiduciary Returns - 1960, Table 6.

Note: Refer to text, Chapter 2.

Table 13

Income After Deduction Of Federal Taxes Paid

(Thousands of Dollars)

	(1)	(2)	(3)	(4)	(5)
Income Brackets	A.G.I.[a]	Federal Taxes Paid[b]		A.G.I. Minus Federal Taxes Paid	
		Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption (1) - (2)	Extensive Shifting Assumption (1) - (3)
Under $ 2,000	39,464.0	7,088.3	9,387.9	32,375.7	30,076.1
$ 2,000 - $ 2,999	48,237.9	8,207.3	9,688.2	40,030.6	38,549.7
$ 3,000 - $ 3,999	83,946.4	13,707.9	15,929.3	70,238.5	68,017.1
$ 4,000 - $ 4,999	90,435.8	15,097.6	17,503.4	75,338.2	72,932.4
$ 5,000 - $ 5,999	95,948.9	14,894.2	17,361.5	81,054.7	78,587.4
$ 6,000 - $ 6,999	102,299.5	16,339.5	18,885.0	85,960.0	83,414.5
$ 7,000 - $ 7,999	86,863.7	14,110.3	16,261.8	72,753.4	70,601.9
$ 8,000 - $ 8,999	83,433.9	13,358.9	15,186.3	70,075.0	68,247.6
$ 9,000 - $ 9,999	64,393.7	10,371.2	11,888.4	54,022.5	52,505.3
$10,000 - $14,999	179,990.5	34,811.6	40,405.6	145,178.9	139,584.9
$15,000 and over	160,025.0	44,846.2	48,277.5	115,178.8	111,747.5
Total[c]	1,035,039.0	192,833.0	220,775.0	842,206.0	814,264.0

a/ Source: Table 19.

b/ Source: Table 54, columns 7 and 8.

c/ Columns may not sum to total due to rounding.

Table 13 (continued)

Income Brackets	(6) Broadened Income[d] Conservative Shifting Assumption	(7) Broadened Income[d] Extensive Shifting Assumption	(8) Federal Taxes Paid[e] Conservative Shifting Assumption	(9) Federal Taxes Paid[e] Extensive Shifting Assumption	(10) Broadened Income Minus Federal Taxes Paid Conservative Shifting Assumption (6) - (8)	(11) Broadened Income Minus Federal Taxes Paid Extensive Shifting Assumption (7) - (9)
Under $ 2,000	55,014.1	54,238.1	10,313.9	11,887.0	44,700.2	42,351.1
$ 2,000 - $ 2,999	70,980.6	70,476.2	10,916.5	11,925.1	60,064.1	58,551.1
$ 3,000 - $ 3,999	104,017.8	102,982.3	18,951.4	20,203.2	85,066.4	82,779.1
$ 4,000 - $ 4,999	105,476.1	104,634.3	19,992.4	21,610.3	85,483.7	83,024.0
$ 5,000 - $ 5,999	105,565.0	105,266.5	18,061.9	20,249.7	87,503.1	85,016.8
$ 6,000 - $ 6,999	115,264.4	113,760.3	22,719.1	23,856.3	92,545.3	89,904.0
$ 7,000 - $ 7,999	98,015.4	96,487.3	19,862.7	20,583.6	78,152.7	75,903.7
$ 8,000 - $ 8,999	90,923.9	89,749.1	17,986.6	18,713.1	72,937.3	71,036.0
$ 9,000 - $ 9,999	70,526.1	69,565.2	13,976.6	14,594.1	56,549.5	54,971.1
$10,000 - $14,999	199,123.8	195,590.3	46,625.8	48,911.5	152,498.0	146,678.8
$15,000 and over	243,334.2	225,648.2	94,522.1	81,394.9	148,812.0	144,253.3
Total[c]	1,258,241.0	1,228,398.0	293,929.0	293,929.0	964,312.0	934,469.0

d/ Source: Table 12.

e/ Source: Table 54, columns 14 and 15.

Note: Refer to text, Chapter 2.

Table 14

Income Distribution Based on State Income Tax Data

Resident Returns

Income Brackets	(1) Number of Returns	(2) Adjusted Gross Income (Dollars)	(3) Proportion of Returns (Percent)	(4) Proportion of A.G.I. (Percent)
Under $ 1,000	28,810	13,553,366	14.93	1.44
$ 1,000 - $ 1,999	18,104	25,910,550	9.38	2.50
$ 2,000 - $ 2,999	19,159	48,237,877	9.93	4.65
$ 3,000 - $ 3,999	23,853	83,946,358	12.36	8.10
$ 4,000 - $ 4,999	20,137	90,435,808	10.43	8.73
$ 5,000 - $ 5,999	17,457	95,948,886	9.04	9.26
$ 6,000 - $ 7,999	27,472	189,163,203	14.23	18.25
$ 8,000 - $ 9,999	16,604	147,827,607	8.60	14.26
$10,000 - $14,999	15,145	179,989,917	7.85	17.37
$15,000 and over	6,274	160,025,593	3.25	15.44
Total	193,015	1,035,039,165	100.00	100.00

Data Source: State of Hawaii Department of Taxation, Hawaii Income Patterns - 1960 Individuals, Table 1.

Note: See text, Chapter 2.

Table 15

Income Distribution Based on State Income Tax Data

Nonresident Returns

	(1)	(2)	(3)	(4)
Income Brackets	Number of Returns	Adjusted Gross Income (Dollars)	Proportion of Returns (Percent)	Proportion of A.G.I. (Percent)
Under $ 1,000	1,168	457,104	30.77	5.78
$ 1,000 - $ 1,999	931	1,394,361	24.53	12.37
$ 2,000 - $ 2,999	595	1,335,800	15.67	11.85
$ 3,000 - $ 3,999	309	962,594	8.14	8.54
$ 4,000 - $ 4,999	269	1,222,630	7.09	10.84
$ 5,000 - $ 5,999	154	709,268	4.06	6.29
$ 6,000 - $ 7,999	157	1,160,755	4.14	10.30
$ 8,000 - $ 9,999	62	513,091	1.63	4.55
$10,000 - $14,999	86	1,022,901	2.26	9.07
$15,000 and over	65	2,299,904	1.71	20.41
Total	3,796	11,272,526	100.00	100.00

Data Source: State of Hawaii Department of Taxation, Hawaii Income Patterns - 1960 Individuals, Table 7.

Note: See text, Chapter 2.

Table 16

Income Distribution Based On Federal Income Tax Data

Income Brackets	(1) Number of Taxable Returns[a]	(2) Adjusted Gross Income on Taxable Returns (Thousands of Dollars)	(3) Proportion of Taxable Returns (Percent)	(4) Proportion of A.G.I. (Percent)	(5) Number of Taxable and Nontaxable Returns[a]	(6) Adjusted Gross Income on Taxable and Nontaxable Returns (Thousands of Dollars)	(7) Proportion of Taxable and Nontaxable Returns (Percent)	(8) Proportion of Taxable and Nontaxable A.G.I. (Percent)
Under $ 1,000	9,597	8,149	4.89	.71	30,975[c]	14,927[c]	13.3	1.2
$ 1,000 - $ 1,999	23,026	33,139	11.73	2.89	29,361	42,505	12.6	3.6
$ 2,000 - $ 2,999	21,778	52,955	11.09	4.61	26,019	63,222	11.2	5.3
$ 3,000 - $ 3,999	26,375	91,891	13.44	8.00	30,749	106,732	13.2	9.0
$ 4,000 - $ 4,999	22,570	101,162	11.50	8.81	23,304[c]	104,006[c]	10.0	8.7
$ 5,000 - $ 5,999	22,204	120,295	11.32	10.47	22,421[c]	121,506[c]	9.6	10.2
$ 6,000 - $ 6,999	17,306	112,456	8.82	9.79	17,523[c]	113,667[c]	7.5	9.5
$ 7,000 - $ 7,999	11,727	87,236	5.98	7.60	11,727	87,236	5.0	7.3
$ 8,000 - $ 8,999	11,707	98,867	5.97	8.61	11,702	98,867	5.0	8.3
$ 9,000 - $ 9,999	8,008	76,512	4.08	6.66	8,008	76,512	3.4	6.4
$10,000 - $14,999	15,525	182,317	7.92	15.87	15,525	182,317	6.6	15.3
$15,000 - $24,999	4,203	77,106	2.14	6.71	4,203	77,106	1.7	6.5
$25,000 and over	2,201	106,444	1.12	9.27	2,201	106,444	.9	8.9
Total[d]	196,227[b]	1,148,529	100.00	100.00	233,723	1,195,047	100.0	100.2

Data Source: Internal Revenue Service, Statistics of Income - 1960, Individual Income Tax Returns, Table 17, page 80.

a/ Mr. Yapp, of the Honolulu Internal Revenue Service, advised that the Number of Returns refer to those Returns filed in Hawaii's I.R.S. office.

b/ Number of Families and Unrelated Individuals (from census data) equals 197,467.

c/ Taxable entries were adjusted to include Nontaxable Returns. Hawaii's data in Statistics of Income - 1960, Table 17, shows 1854 Nontaxable Returns unassigned to income brackets. The U.S. Average Tax Return figures (Statistics of Income - 1960, Table 13, page 66) were used to distribute the 1854 Returns. Similarly, the U.S. average A.G.I. figures were used to distribute the Nontaxable A.G.I. The estimates are as follows:

Income Brackets	Nontaxable Returns	Nontaxable A.G.I. (Thousands of Dollars)
Under $1,000	686	1720 (loss)
$4,000 - $4,999	734	2844
$5,000 - $5,999	217	1211
$6,000 - $6,999	217	1211.

d/ Columns may not sum due to rounding.

Note: Refer to text, Chapter 2.

Table 17

Various Ratios (Hawaii: U.S.)

Name of Item	Item Number	Hawaii[a]	U.S.[b]	Hawaii: U.S.[c] (Percent)	Item	Hawaii (Percent)	U.S. (Percent)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Number of Returns	(1)	233,723	61,024,547	.38	---	---	---
A.G.I.	(2)	1,195,047	315,831,693	.38	---	---	---
Salary and Wages (Net)	(3)	982,557	258,170,232	.38	(3)/(2)	82.2	81.7
Dividends (after exclusions)	(4)	37,682	9,597,267	.39	(4)/(2)	3.2	3.0
Interest Received	(5)	14,265	5,070,101	.28	(5)/(2)	1.2	1.6
Combined Business Net Profit and Loss	(6)	75,637	21,069,953	.36	(6)/(2)	6.3	6.7
Combined Partnership Net Profit and Loss	(7)	28,802	8,992,964	.32	(7)/(2)	2.4	2.9
Combined Net Gain and Loss Sales of Capital Assets	(8)	24,255	5,313,688	.46	(8)/(2)	2.0	1.7
Combined Rent Net Income and Loss	(9)	12,364	2,720,962	.45	(9)/(2)	1.0	.9
Combined Royalty Net Income and Loss	(10)	---	589,327	---	(10)/(2)	---	.2
Taxable Income	(11)	668,576	171,931,909	.39	(11)/(2)	55.9	54.4
Income Tax After Credits	(12)	154,450	39,545,386	.39	(12)/(2)	12.9	12.5

a/ Data Source: Director of Taxation, State of Hawaii Department of Taxation.

b/ Data Source: Internal Revenue Service

c/ Note constancy.

Note: Refer to text, Chapter 2.

Table 18

Hawaii Source Distribution Of Income

A.G.I. In Dollars	A-1 Salaries and Wages (Dollars)	A-1 Salaries and Wages (Percent)	B-2 Dividends (Dollars)	B-2 Dividends (Percent)	C-3 Interest (Dollars)	C-3 Interest (Percent)	C-4 Annuity (Dollars)	C-4 Annuity (Percent)
Under $ 1,000	13,105,640	1.53	213,576	.89	379,986	3.00	7,014	1.38
$ 1,000 - $ 1,999	21,765,303	2.55	409,780	1.71	679,106	5.36	---	---
$ 2,000 - $ 2,999	43,082,408	5.04	405,311	1.69	470,997	3.71	32,284	6.35
$ 3,000 - $ 3,999	77,821,714	9.11	829,389	3.47	679,298	5.36	14,775	2.91
$ 4,000 - $ 4,999	84,362,641	9.87	674,069	2.82	628,248	4.95	---	---
$ 5,000 - $ 5,999	87,374,506	10.23	242,354	1.00	1,151,848	9.08	139,612	27.48
$ 6,000 - $ 7,999	171,438,419	20.07	2,432,333	10.16	1,338,410	10.56	55,032	10.84
$ 8,000 - $ 9,999	132,697,718	15.53	1,713,440	7.16	1,377,448	10.86	7,390	1.45
$10,000 - $14,999	149,662,506	17.52	2,833,035	11.84	2,345,280	18.49	59,904	11.79
$15,000 - $19,999	34,824,071	4.07	1,870,591	7.82	1,204,838	9.50	63,531	12.50
$20,000 - $24,999	13,564,943	1.59	1,605,914	6.71	614,729	4.85	19,722	3.88
$25,000 and over	24,669,707	2.89	10,700,530	44.73	1,811,029	14.28	108,871	21.42
Total	854,369,576	100.00	23,930,322	100.00	12,681,217	100.00	508,135	100.00

Data Source: State of Hawaii Department of Taxation, Hawaii Income Patterns - 1960 Individuals, Table 12.

Note: Refer to text, Chapter 2.

Table 18 (continued)

A.G.I. In Dollars	5-a Business And Professions (Profit)	5-b Business And Professions (Loss)	6-a Sale Of Capital Assets (Profit)	6-b Sale Of Capital Assets (Loss)	7-a Sale of Property Other Than Capital Assets (Profit)	7-b Sale of Property Other Than Capital Assets (Loss)	8-a Rents And Royalties (Profit)	8-b Rents And Royalties (Loss)
Under $ 1,000	964,528	1,821,708	556,608	39,065	58	9,087	615,084	169,678
$ 1,000 - $ 1,999	1,799,434	152,871	88,366	62,241	---	---	861,756	---
$ 2,000 - $ 2,999	3,080,897	41,782	169,853	59,634	73,674	---	600,652	87,729
$ 3,000 - $ 3,999	2,859,771	126,963	359,409	132,227	---	286	1,170,283	259,071
$ 4,000 - $ 4,999	2,897,718	106,405	266,941	174,859	---	1,201	588,052	85,334
$ 5,000 - $ 5,999	5,680,355	386,390	499,561	300,169	---	---	939,264	183,055
$ 6,000 - $ 7,999	5,818,037	165,009	978,272	228,553	41,271	---	3,053,132	158,032
$ 8,000 - $ 9,999	6,071,181	105,856	1,658,811	218,346	22,962	23,546	1,841,690	152,596
$10,000 - $14,999	14,616,305	122,089	2,536,307	514,956	108,133	76,807	3,072,319	267,054
$15,000 - $19,999	9,065,063	57,191	2,396,229	200,440	21,487	67	1,161,557	120,398
$20,000 - $24,999	5,383,347	67,564	1,294,906	58,025	443,726	13,141	1,406,967	139,646
$25,000 and over	17,414,557	508,352	7,790,685	260,421	110,586	20,643	2,708,104	226,467

Table 18 (continued)

	9-a	9-b	10-a	10-b	11-a	11-b
	Partnerships		Estates and Trusts		All Other Sources	
	(Profit)	(Loss)	(Profit)	(Loss)	(Profit)	(Loss)
Under $ 1,000	104,702	338,591	3,224	---	127,905	146,830
$ 1,000 - $ 1,999	227,914	612	195,012	---	99,725	122
$ 2,000 - $ 2,999	214,981	---	187,953	---	108,012	---
$ 3,000 - $ 3,999	299,732	84,970	198,598	---	359,397	42,491
$ 4,000 - $ 4,999	1,079,834	---	---	---	383,179	77,075
$ 5,000 - $ 5,999	421,117	86,544	94,530	---	361,897	---
$ 6,000 - $ 7,999	2,793,527	28,602	615,776	---	1,224,079	44,889
$ 8,000 - $ 9,999	2,504,905	193,884	90,829	---	566,966	31,505
$10,000 - $14,999	4,576,243	200,034	331,197	2,954	1,065,271	32,094
$15,000 - $19,999	3,065,825	83,324	350,702	---	404,955	7,575
$20,000 - $24,999	2,581,061	23,526	437,308	7,905	417,347	8,544
$25,000 and over	10,156,510	250,002	3,013,874	29,170	591,326	167,199

Table 18 (continued)

	D-12		C-13		C-14		E-15	
	Net Income Business and Professions (5a) - (5b)		Net Income Sale of Capital Assets (6a) - (6b)		Net Income Sale of Property Other Than Capital Assets (7a) - (7b)		Net Income Rents and Royalties (8a) - (8b)	
	(Dollars)	(Percent)	(Dollars)	(Percent)	(Dollars)	(Percent)	(Dollars)	(Percent)
Under $ 1,000	(857,180)	---	517,543	3.17	(9029)	---	445,406	2.75
$ 1,000 - $ 1,999	1,646,563	2.26	26,125	.16	---	---	861,756	5.33
$ 2,000 - $ 2,999	3,039,115	4.17	110,219	.67	73,674	10.70	512,923	3.17
$ 3,000 - $ 3,999	2,732,808	3.75	227,182	1.39	(286)	---	911,212	5.63
$ 4,000 - $ 4,999	2,791,313	3.83	92,082	.56	(1201)	---	502,718	3.11
$ 5,000 - $ 5,999	5,293,965	7.27	199,392	1.22	---	---	756,209	4.68
$ 6,000 - $ 7,999	5,653,028	7.76	749,719	4.59	41,271	6.00	2,895,100	17.91
$ 8,000 - $ 9,999	5,965,325	8.19	1,440,465	8.81	(584)	---	1,689,094	10.45
$10,000 - $14,999	14,494,216	19.90	2,021,351	12.36	31,326	4.55	2,805,265	17.34
$15,000 - $19,999	3,007,872	12.36	2,195,789	13.43	21,400	3.11	1,041,159	6.44
$20,000 - $24,999	5,315,783	7.30	1,236,881	7.56	430,585	62.57	1,267,321	7.84
$25,000 and over	16,906,205	23.21	7,530,264	46.08	89,943	13.07	2,481,637	15.35
Net Total	71,989,013	100.00	16,347,012	100.00	677,119	100.00	16,169,800	100.00
Gross Total	72,846,193		16,347,012		688,219		16,169,800	

Table 18 (continued)

	D-16		C-17		C-18	
	Net Income Partnership (9a) - (9b)		Net Income Estates and Trusts (10a) - (10b)		Net Income All Other Sources (11a) - (11b)	
	(Dollars)	(Percent)	(Dollars)	(Percent)	(Dollars)	(Percent)
Under $ 1,000	(233,889)	---	3,224	.06	(18,925)	---
$ 1,000 - $ 1,999	227,302	.84	195,012	3.56	99,603	1.61
$ 2,000 - $ 2,999	214,981	.80	187,953	3.43	108,012	1.75
$ 3,000 - $ 3,999	214,762	.80	198,598	3.62	136,906	5.14
$ 4,000 - $ 4,999	1,079,834	4.00	---	---	306,104	4.96
$ 5,000 - $ 5,999	334,573	1.24	94,530	1.72	361,897	5.87
$ 6,000 - $ 7,999	2,764,925	10.25	615,776	11.24	1,179,190	19.11
$ 8,000 - $ 9,999	2,311,021	8.57	90,829	1.66	535,461	8.68
$10,000 - $14,999	4,376,209	16.23	328,243	5.99	1,033,177	16.74
$15,000 - $19,999	2,982,501	11.06	350,702	6.40	397,380	6.44
$20,000 - $24,999	2,557,535	9.48	429,403	7.84	408,803	6.62
$25,000 and over	9,906,508	36.73	2,984,704	54.48	1,424,127	23.08
Net Total	26,736,262	100.00	5,478,974	100.00	6,151,735	100.00
Gross Total	26,970,151		5,478,974		6,170,660	

Table 19

Source Distribution of Income By Income Brackets in Dollars and Percent[a/]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Income Bracket	A.G.I.		Group A Wages and Salaries		Group B Dividend		Group C Capital		Group D Noncorporate Business		Group E Rental Income	
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
Under $ 2,000	39,463,916	3.81	34,870,943	4.08	623,356	2.60	1,879,659	4.50	782,796	1.88[d/]	1,307,162	8.08
$ 2,000 - $ 2,999	48,237,877	4.66	43,082,408	5.04	405,311	1.69	983,139	2.35	3,254,096	3.26	512,923	3.17
$ 3,000 - $ 3,999	83,946,358	8.11	77,821,714	9.11	829,389	3.47	1,436,473	3.43	2,947,570	2.95	911,212	5.63
$ 4,000 - $ 4,999	90,435,808	8.74	84,362,641	9.88	674,069	2.82	1,025,233	2.45	3,871,147	3.88	502,718	3.11
$ 5,000 - $ 5,999	95,948,886	9.27	87,374,506	10.22	242,354	1.00	1,947,279	4.65	5,628,538	5.64	756,209	4.68
$ 6,000 - $ 6,999[b/]	102,261,869	9.88	93,040,847	10.89	1,206,088	5.04	2,328,156	4.97	4,432,765	4.49	1,562,003	9.66
$ 7,000 - $ 7,999[b/]	86,839,786	8.39	78,431,127	9.18	1,225,232	5.12	2,126,726	4.54	3,889,776	3.94	1,334,009	8.25
$ 8,000 - $ 8,999[b/]	83,424,157	8.06	75,184,523	8.80	942,855	3.94	2,136,095	4.56	4,403,147	4.46	924,913	5.72
$ 9,000 - $ 9,999[b/]	64,379,436	6.22	57,584,509	6.74	770,556	3.22	1,728,551	3.69	3,781,178	3.83	764,832	4.73
$10,000 - $14,999	179,990,512	17.39	149,662,506	17.52	2,833,035	11.84	5,819,281	13.91	18,870,425	18.90	2,805,265	17.34
$15,000 and over	160,024,998	15.47	73,058,721	8.55	14,177,035	59.26	21,322,721	50.95	46,676,404	46.77	4,790,117	29.63
Total[c/]	1,035,039,165	100.00	854,369,576	100.00	23,930,322	100.00	46,849,192	100.00	98,725,275	100.00	16,169,800	100.00
$ 6,000 - $ 7,999	189,163,203	18.27	171,438,419	20.07	2,432,333	10.16	3,979,398	9.51	8,417,953	8.43	2,895,100	17.91
$ 8,000 - $ 9,999	147,827,607	14.28	132,697,718	15.53	1,713,440	7.16	3,451,009	8.25	8,276,346	8.29	1,689,094	10.45

a/ Compiled from data given in Table 18.

b/ Estimated by linear interpolation. See text, Chapter 2, page 20, for details.

c/ Columns may not sum up to given totals due to rounding.

d/ A final check of the figures revealed that this figure is about 1% too high. The calculation was based on a gross dollar amount while the dollar figure shown is a net amount (subtracting a loss item for the under $1,000 group). This means that the first income bracket gets assigned about 1% too much of those taxes which are allocated via Noncorporate Business income distribution. This error, however, does not significantly alter the findings. For example, of the $12,000,000 of tax assigned in the Conservative Shifting Without Adjustment case, this bracket gets $120,000 too much. The A.G.I. for this bracket is $40,000,000, and so the maximum error in the tax rate estimate is well under 1/2 of 1 percentage point.

Table 20

Source Distribution of Income

In Percent

Income Bracket	A.G.I.	Wages and Salaries	Dividend	Capital	Business and Professions	Rental Income
	A.G.I.	A.G.I.	A.G.I.	A.G.I.	A.G.I.	A.G.I.
Under $ 2,000	100.00	88.36	1.58	4.76	1.98	3.32
$ 2,000 - $ 2,999	100.00	89.31	.84	2.04	6.75	1.26
$ 3,000 - $ 3,999	100.00	92.70	.99	1.71	3.51	1.09
$ 4,000 - $ 4,999	100.00	93.28	.75	1.13	4.28	.56
$ 5,000 - $ 5,999	100.00	91.06	.25	2.03	5.87	.79
$ 6,000 - $ 6,999	100.30	90.98	1.18	2.28	4.33	1.53
$ 7,000 - $ 7,999	100.20	90.32	1.41	2.45	4.48	1.54
$ 8,000 - $ 8,999	100.69	90.12	1.62	2.56	5.28	1.11
$ 9,000 - $ 9,999	100.14	89.45	2.51	1.12	5.87	1.19
$10,000 - $14,999	100.00	83.15	1.57	3.23	10.48	1.57
$15,000 and over	100.00	45.65	8.86	13.33	29.17	2.99
Overall	100.48	82.54	2.31	4.53	9.54	1.56

Table 21

Interpolation For Detailed Income Bracket Distributions

Income Bracket	Total	Wages and Salaries A	Dividend B	Capital C	Noncorporate Business D	Rent E
$6,000 - $7,999						
a*	10.86	12.17	2.66	4.72	5.70	5.14
b*	9.22	10.27	2.70	4.32	5.01	4.39
m**	18.27	20.07	10.16	9.51	8.43	17.91
$8,000 - $9,999						
a*	7.41	8.16	2.62	3.77	4.45	4.07
b*	5.72	6.24	2.14	3.05	3.83	3.36
m**	14.28	15.53	7.16	8.25	8.29	10.45
$6,000 - $6,999	9.88	10.89	5.04	4.97	4.49	9.66
$7,000 - $7,999	8.39	9.18	5.12	4.54	3.94	8.25
$8,000 - $8,999	8.06	8.80	3.94	4.56	4.46	5.72
$9,000 - $9,999	6.22	6.74	3.22	3.69	3.83	4.73

* Source: Internal Revenue Service, Statistics of Income - 1960, Individual Returns, Table 3. Refer to our Table 23.

** Source: State of Hawaii Department of Taxation, Patterns of Income - 1960, Individuals, Table 12. Refer to our Table 19.

Note: Refer to text, Chapter 2, page 19.

Table 22

U.S. Source Distribution Of Income

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A.G.I. Income Bracket	Salaries and Wages		Dividends		Interest Received		Business and Profession (Net)	
	(Dollars)	(Percent)	(Dollars)	(Percent)	(Dollars)	(Percent)	(Dollars)	(Percent)
Under $ 1,000	3,201,678	1.24	118,863	1.24	156,670	3.09	(722,254)	---
$ 1,000 - $ 1,999	8,341,523	3.24	205,393	2.16	369,655	7.31	1,030,576	4.72
$ 2,000 - $ 2,999	14,088,674	5.46	308,376	3.23	373,069	7.38	1,436,779	6.60
$ 3,000 - $ 3,999	20,581,954	7.98	256,410	2.69	347,385	6.87	1,685,498	7.73
$ 4,000 - $ 4,999	27,451,193	10.64	274,069	2.88	328,713	6.50	1,735,532	7.96
$ 5,000 - $ 5,999	32,158,793	12.47	270,591	2.84	336,141	6.65	1,479,413	6.79
$ 6,000 - $ 7,999	57,884,009	22.44	510,581	5.36	575,864	11.39	2,571,553	11.80
$ 8,000 - $ 9,999	37,141,297	14.40	453,977	4.76	427,282	8.45	1,898,210	8.71
$10,000 - $14,999	35,418,026	13.74	1,012,189	10.62	674,160	13.33	3,072,678	14.10
$15,000 - $19,999	8,461,039	3.28	750,654	7.88	353,634	6.99	1,975,679	9.07
$20,000 - $24,999	3,720,619	1.44	581,581	6.10	231,333	4.58	1,287,153	5.90
$25,000 and over	9,469,349	3.67	4,787,459	50.24	882,887	17.46	3,620,939	16.62
Net Total	257,917,854	100.00	9,530,143	100.00	5,056,793	100.00	21,071,756	100.00
Gross Total							21,794,010	
A.G.I. Classes								
$ 6,000 - $ 6,999	31,396,062	12.17	253,564	2.66	302,511	5.98	1,390,067	6.37
$ 7,000 - $ 7,999	26,487,947	10.27	257,017	2.70	273,353	5.41	1,181,486	5.43
$ 8,000 - $ 8,999	21,051,895	8.16	249,319	2.62	243,490	4.82	1,018,469	4.67
$ 9,000 - $ 9,999	16,089,402	6.24	204,658	2.14	183,792	3.63	879,741	4.04

Data Source: Internal Revenue Service, Statistics of Income, 1960, Individual Income Tax Returns.

Note: Refer to text, Chapter 2.

Table 22 (continued)

A.G.I. Income Bracket	(9) Partnership (Net) (Dollars)	(10) Partnership (Net) (Percent)	(11) Sale of Cap. Assets (Net) (Dollars)	(12) Sale of Cap. Assets (Net) (Percent)	(13) Sale of Prop. Other Than Cap. Assets (Dollars)	(14) Sale of Prop. Other Than Cap. Assets (Percent)	(15) Pensions and Annuities (Net) (Dollars)	(16) Pensions and Annuities (Net) (Percent)
Under $ 1,000	(211,007)	---	210,912	3.97	(49,424)	---	33,416	2.06
$ 1,000 - $ 1,999	116,342	1.26	116,234	2.20	(9,227)	---	195,415	12.09
$ 2,000 - $ 2,999	147,279	1.61	168,368	3.18	(3,480)	---	306,470	18.95
$ 3,000 - $ 3,999	304,056	3.31	156,064	2.94	(4,834)	---	230,192	14.24
$ 4,000 - $ 4,999	370,798	4.04	137,860	2.60	(844)	---	163,965	10.14
$ 5,000 - $ 5,999	409,813	4.47	134,339	2.54	(2,345)	---	124,168	7.68
$ 6,000 - $ 7,999	742,246	8.09	268,505	5.06	(2,858)	---	179,844	10.69
$ 8,000 - $ 9,999	664,893	7.25	253,204	4.78	(1,761)	---	107,729	6.67
$10,000 - $14,999	1,287,456	14.03	492,514	9.26	(2,868)	---	114,446	7.07
$15,000 - $19,999	1,026,456	11.18	335,416	6.33	(1,112)	---	50,386	3.12
$20,000 - $24,999	771,477	8.41	241,035	4.54	2,562	100.00	31,695	1.96
$25,000 and over	3,336,317	36.35	2,785,124	52.56	(6,518)	---	86,232	5.33
Net Total	8,966,046	100.00	5,299,575	100.00	(82,709)	---	1,616,958	100.00
Gross Total	9,177,053				2,562			
A.G.I. Classes								
$ 6,000 - $ 6,999	372,325	4.06	122,963	2.32	(1,445)	---	110,559	6.84
$ 7,000 - $ 7,999	369,841	4.03	145,542	2.74	(1,413)	---	62,285	3.85
$ 8,000 - $ 8,999	358,010	3.90	135,279	2.56	(1,573)	---	69,021	4.27
$ 9,000 - $ 9,999	306,883	3.35	117,925	2.22	(188)	---	38,708	2.40

Table 22 (continued)

A.G.I. Income Bracket	(17) Rents (Net) (Dollars)	(18) Rents (Net) (Percent)	(19) Royalties (Net) (Dollars)	(20) Royalties (Net) (Percent)	(21) Estates and Trusts (Net) (Dollars)	(22) Estates and Trusts (Net) (Percent)	(23) Other Sources (Dollars)	(24) Other Sources (Percent)	(25) Net Operation Loss Deduction -165,634
Under $ 1,000	85,708	3.14	3,334	.57	(5460)	---	(92292)	---	
$ 1,000 - $ 1,999	286,354	10.50	20,330	3.48	18,945	2.96	172,590	7.18	
$ 2,000 - $ 2,999	254,911	9.34	27,819	4.76	26,699	4.17	197,273	8.21	
$ 3,000 - $ 3,999	216,297	7.93	23,117	3.96	27,796	4.34	212,505	8.85	
$ 4,000 - $ 4,999	165,323	6.06	18,265	3.13	29,093	4.54	211,103	8.79	
$ 5,000 - $ 5,999	128,406	4.71	23,353	4.00	26,331	4.12	163,441	6.81	
$ 6,000 - $ 7,999	270,868	9.93	44,877	7.68	48,385	7.55	280,244	11.67	
$ 8,000 - $ 9,999	197,750	7.25	48,469	8.29	31,547	4.92	193,953	8.08	
$10,000 - $14,999	323,239	11.85	63,907	10.94	85,279	13.31	266,153	11.08	
$15,000 - $19,999	193,638	7.10	43,314	7.41	59,871	9.35	151,655	6.32	
$20,000 - $24,999	135,700	4.97	32,154	5.50	48,038	7.50	117,600	4.90	
$25,000 and over	469,377	17.22	235,261	40.28	238,558	37.24	434,432	18.11	
Net Total	2,727,661	100.00	584,200	100.00	635,082	100.00	2,308,657	100.00	
Gross Total					640,542		2,400,949		
A.G.I. Classes									
$ 6,000 - $ 6,999	149,424	5.48	20,958	3.59	23,148	3.61	143,842	5.99	
$ 7,000 - $ 7,999	121,444	4.45	23,919	4.09	25,237	3.94	136,402	5.68	
$ 8,000 - $ 8,999	107,521	3.94	27,426	4.69	20,255	3.16	92,936	3.87	
$ 9,000 - $ 9,999	90,229	3.31	21,043	3.60	11,292	1.76	101,017	4.21	

Table 23

U.S. Source Distribution of
Income in Dollars and Percent

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
A.G.I. Income Bracket	Salaries and Wages		Dividends		Interest		Business and Professions		Rent		Total	
	Dollars[a]	Percent	Dollars[a]	Percent	Dollars[a]	Percent	Dollars[a]	Percent	Dollars[a]	Percent	Dollars[a]	Percent
Under $ 1,000	3,201,678	1.24	118,863	1.24	253,822	1.71	(933,261)	---	89,042	2.69	2,730,144	.86
$ 1,000 - $ 1,999	8,341,523	3.24	205,393	2.16	863,612	5.83	1,146,918	3.70	306,684	9.26	10,864,130	3.44
$ 2,000 - $ 2,999	14,088,674	5.46	308,376	3.23	1,068,399	7.21	1,584,058	5.12	282,730	8.54	17,332,237	5.49
$ 3,000 - $ 3,999	20,581,954	7.98	256,410	2.69	969,108	6.54	1,989,554	6.43	239,414	7.23	24,036,440	7.62
$ 4,000 - $ 4,999	27,451,193	10.64	274,069	2.88	869,890	5.86	2,106,330	6.80	183,588	5.54	30,885,070	9.78
$ 5,000 - $ 5,999	32,158,793	12.47	270,591	2.84	782,075	5.27	1,889,226	6.10	151,759	4.58	35,252,444	11.17
$ 6,000 - $ 6,999	31,396,062	12.17	253,564	2.66	701,578	4.72	1,762,392	5.70	170,382	5.14	34,283,978	10.86
$ 7,000 - $ 7,999	26,487,941	10.27	257,017	2.70	641,406	4.32	1,551,327	5.01	145,363	4.39	29,083,060	9.22
$ 8,000 - $ 8,999	21,051,895	8.16	249,319	2.62	559,408	3.77	1,376,479	4.45	134,947	4.07	23,372,048	7.41
$ 9,000 - $ 9,999	16,089,402	6.24	204,658	2.14	452,546	3.05	1,186,624	3.83	111,272	3.36	18,044,502	5.72
$10,000 - $14,999	35,418,026	13.74	1,012,189	10.62	1,629,684	10.99	4,360,134	14.08	387,146	11.69	42,807,179	13.56
$15,000 - $19,999	8,461,039	3.28	750,654	7.88	949,850	6.40	3,002,135	9.70	236,952	7.16	13,400,630	4.25
$20,000 - $24,999	3,720,619	1.44	581,581	6.10	672,263	4.53	2,058,630	6.65	167,854	5.07	7,200,947	2.28
$25,000 and over	9,469,049	3.67	4,787,459	50.24	4,420,715	29.80	6,957,256	22.43	704,638	21.28	26,339,117	8.34
Net Total	257,917,854	100.00	9,530,143	100.00	14,834,356	100.00	30,037,802	100.00	3,311,771	100.00	315,631,926	100.00
Gross Total							30,971,063					
$ 6,000 - $ 7,999		22.44		5.36		9.04		10.71		9.53		20.08
$ 8,000 - $ 9,999		14.40		4.76		6.82		8.28		7.43		13.13

a/ Thousands of Dollars.

Data Source: Table 22.

Note: Refer to text, Chapter 2.

Table 24

Hawaii Expenditure Patterns
By Income Brackets In Dollars

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
				Food								
Income Bracket	Number of Households[a]	Percent of Households	All Expenditures[b]	All	Home	Away	Tobacco	Alcoholic Beverage	Clothing	Personal Care	Medical Care	Recreation
Under $ 2,000	42,533	21.5	1,988	777	745	33	4	--	83	53	107	49
$ 2,000 - $ 2,999	19,185	9.7	2,843	929	655	275	15	32	269	78	64	69
$ 3,000 - $ 3,999	23,065	11.7	3,544	990	760	230	58	104	296	130	243	99
$ 4,000 - $ 4,999	19,639	9.9	4,511	1,191	795	397	79	222	307	158	295	158
$ 5,000 - $ 5,999	17,708	9.0	5,124	1,545	1,285	260	85	136	283	142	354	98
$ 6,000 - $ 6,999	15,338	7.8	6,113	1,652	1,288	364	86	100	430	181	352	293
$ 7,000 - $ 7,999[c]	12,146	6.2	6,516	1,746	1,357	389	87	116	503	195	371	324
$ 8,000 - $ 8,999	9,725	4.9	6,919	1,840	1,426	414	88	132	576	209	390	355
$ 9,000 - $ 9,999	8,066	4.1	6,919	1,840	1,426	414	88	132	576	209	390	355
$10,000 - $14,999	20,647	10.4	9,974	2,486	1,797	689	118	211	966	324	587	460
$15,000 and over	9,415	4.8	13,404	2,813	1,932	861	148	369	1,574	372	857	781
Total	197,467	100.0	67,855	17,809	13,466	4,326	856	1,554	5,863	2,051	4,010	3,041

a/ Data source: Census of Population, 1960, Hawaii, Table 65.

b/ Columns 3 through 24 are Bureau of Labor Statistics Expenditure Survey Data.

c/ See text, Chapter 2 on bias.

Table 24 (continued)

Income Bracket	(13) Reading	(14) Other	(15) Fuel and Light	(16) Household Operation	(17) Other Travel	(18) Auto-mobile	(19) Education	(20) Furniture and Equipment	(21) Shelter All	(22) Shelter Rent	(23) Shelter Own	(24) Shelter Other
Under $ 2,000	34	12	100	209	34	35	9	60	386	321	66	--
$ 2,000 - $ 2,999	18	17	82	222	121	225	23	110	569	367	--	202
$ 3,000 - $ 3,999	21	27	66	203	129	302	3	184	688	625	15	48
$ 4,000 - $ 4,999	35	54	121	239	99	604	23	156	765	629	134	3
$ 5,000 - $ 5,999	30	195	182	281	177	619	47	124	821	228	565	28
$ 6,000 - $ 6,999	64	197	190	296	142	963	112	222	799	505	276	17
$ 7,000 - $ 7,999[c/]	66	196	209	376	169	928	101	246	859	492	345	20
$ 8,000 - $ 8,999	69	196	228	457	197	894	90	270	919	480	415	24
$ 9,000 - $ 9,999	69	196	228	457	197	894	90	270	919	480	415	24
$10,000 - $14,999	116	303	274	552	285	1,310	404	389	1,169	408	673	87
$15,000 and over	101	398	309	760	1,344	1,474	362	331	1,411	147	1,089	176
Total	623	1,791	1,989	4,052	2,894	8,248	1,264	2,362	9,305	4,682	3,993	629

Table 24 (Continued)

Income Bracket	(25) All Expenditures[d/] (1) X (3)	(26) Food All (1) X (4)	(27) Food Home (1) X (5)	(28) Food Away (1) X (6)	(29) Tobacco (1) X (7)	(30) Alcoholic Beverage (1) X (8)	(31) Clothing (1) X (9)	(32) Personal Care (1) X (10)
Under $ 2,000	845,556.04	330,481.41	316,870.85	14,035.89	1,701.32	---	35,302.39	22,542.49
$ 2,000 - $ 2,999	545,429.55	178,228.65	125,661.75	52,758.75	2,877.75	6,139.20	51,607.65	14,964.30
$ 3,000 - $ 3,999	817,423.60	228,343.50	175,294.00	53,049.50	13,377.70	23,987.60	68,272.40	29,984.50
$ 4,000 - $ 4,999	885,915.29	233,900.49	156,130.05	77,966.83	15,514.81	43,598.58	60,291.73	31,029.62
$ 5,000 - $ 5,999	907,357.92	273,588.60	227,547.80	46,040.80	15,051.80	24,082.88	50,113.64	25,145.36
$ 6,000 - $ 6,999	937,611.94	253,383.76	197,553.44	55,830.32	13,190.68	15,338.00	65,953.40	27,761.78
$ 7,000 - $ 7,999[c/]	791,433.36	212,069.16	164,821.22	47,247.94	10,567.02	14,089.36	61,094.38	23,684.70
$ 8,000 - $ 8,999	672,872.75	178,940.00	138,678.50	40,261.50	8,558.00	12,837.00	56,016.00	20,325.25
$ 9,000 - $ 9,999	558,086.54	148,414.40	115,021.16	33,393.24	7,098.08	10,647.12	46,460.16	16,857.94
$10,000 - $14,999	2,059,331.78	513,284.42	371,026.59	142,257.83	24,363.46	43,565.17	199,450.02	66,896.28
$15,000 and over	1,261,986.60	264,843.95	181,897.80	81,063.15	13,934.20	34,741.35	148,192.10	35,023.80
Total	10,283,005.37	2,815,478.34	2,170,503.16	643,905.75	126,234.82	229,026.26	842,753.87	314,216.02

d/ Items in columns 25 through 46 are obtained by multiplying the BLS sample data with the Number of Households given in column 1.

Table 24 (continued)

Income Bracket	(33) Medical Care (1) X (11)	(34) Recreation (1) X (12)	(35) Reading (1) X (13)	(36) Other (1) X (14)	(37) Fuel and Light (1) X (15)	(38) Household Operation (1) X (16)	(39) Other Travel (1) X (17)	(40) Automobile (1) X (18)
Under $ 2,000	45,510.31	20,841.17	14,461.22	5,103.96	42,533.00	88,893.97	14,461.22	14,886.55
$ 2,000 - $ 2,999	12,278.40	13,237.65	3,453.30	3,261.45	15,731.70	42,590.70	23,213.85	43,166.25
$ 3,000 - $ 3,999	56,047.95	22,834.35	4,843.65	6,227.55	15,222.90	46,821.95	29,753.85	69,656.30
$ 4,000 - $ 4,999	57,935.05	31,029.62	6,873.65	10,605.06	23,763.19	46,937.21	19,442.61	118,619.56
$ 5,000 - $ 5,999	62,686.32	17,353.84	5,312.40	34,530.60	32,228.56	49,759.48	31,343.16	109,612.52
$ 6,000 - $ 6,999	53,989.76	44,940.34	9,816.32	30,215.86	29,142.20	45,400.48	21,779.96	147,704.94
$ 7,000 - $ 7,999[c/]	45,061.66	39,353.04	8,077.09	23,866.89	25,385.14	45,729.69	20,587.47	112,775.61
$ 8,000 - $ 8,999	37,927.50	34,523.75	6,710.25	19,061.00	22,173.00	44,443.25	19,158.25	86,941.50
$ 9,000 - $ 9,999	31,457.40	28,634.30	5,565.54	15,809.36	18,390.48	36,861.62	15,390.02	72,110.04
$10,000 - $14,999	121,197.89	94,976.20	23,950.52	62,560.41	56,572.78	113,971.44	58,843.95	270,475.70
$15,000 and over	80,686.55	73,531.15	9,509.15	37,471.70	29,092.35	71,554.00	126,537.60	138,777.10
Total	604,778.79	421,255.41	98,573.09	248,713.84	310,235.30	632,963.79	381,011.94	1,184,726.07

Table 24 (continued)

Income Bracket	(41) Education (1) X (19)	(42) Furniture and Equipment (1) X (20)	(43) Shelter All (1) X (21)	(44) Shelter Rent (1) X (22)	(45) Shelter Own (1) X (23)	(46) Shelter Other (1) X (24)	(47) All Expenditures Except - Shelter, Furniture and Education	(48) All Expenditures Except - Shelter, Furniture and Automobile
Under $ 2,000	3,827.97	25,519.80	164,177.38	136,530.93	28,071.78	--	636,719.01	204,583.73
$ 2,000 - $ 2,999	4,412.55	21,103.50	109,162.65	70,408.95	--	38,753.70	410,750.85	173,432.40
$ 3,000 - $ 3,999	691.95	42,439.60	158,687.20	144,156.25	3,459.75	11,071.20	615,374.20	270,783.10
$ 4,000 - $ 4,999	4,516.97	30,636.84	150,238.35	123,529.31	26,316.26	589.17	699,541.18	299,494.75
$ 5,000 - $ 5,999	8,322.76	21,957.92	145,382.68	40,374.24	100,050.20	4,958.24	730,809.16	276,953.12
$ 6,000 - $ 6,999	17,178.56	34,050.36	122,550.62	77,456.90	42,332.88	2,607.46	758,617.48	304,305.92
$ 7,000 - $ 7,999[c/]	12,267.46	29,879.16	104,334.14	59,819.05	41,964.43	2,489.93	642,341.21	246,988.91
$ 8,000 - $ 8,999	8,752.50	26,257.50	89,372.75	46,680.00	40,358.75	2,334.00	547,614.75	202,571.75
$ 9,000 - $ 9,999	7,259.40	21,778.20	74,126.54	38,716.80	33,473.90	1,935.84	454,196.46	168,014.78
$10,000 - $14,999	83,413.88	80,316.83	241,363.43	84,239.76	138,954.31	17,962.89	1,650,108.24	592,155.96
$15,000 and over	34,082.30	31,163.65	132,845.65	13,840.05	102,529.35	16,570.40	1,063,895.00	302,786.40
Total	184,726.30	365,103.36	1,492,241.39	835,752.24	557,511.61	99,272.83	8,209,967.54	3,042,070.82

Table 25

Hawaii Expenditure Patterns
By Income Brackets In Percent[a/]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Food						
Income Bracket	All Expenditure	All	Home	Away	Tobacco	Alcoholic Beverage	Clothing	Personal Care
Under $ 2,000	8.23	11.74	14.59	2.17	1.34	--	4.18	7.17
$ 2,000 - $ 2,999	5.30	6.33	5.79	8.20	2.28	2.68	6.13	4.76
$ 3,000 - $ 3,999	7.95	8.11	8.08	8.24	10.60	10.47	8.10	9.54
$ 4,000 - $ 4,999	8.61	8.30	7.19	12.11	12.29	19.04	7.15	9.88
$ 5,000 - $ 5,999	8.83	9.72	10.49	7.15	11.92	10.52	5.95	8.00
$ 6,000 - $ 6,999	9.11	9.00	9.10	8.67	10.45	6.69	7.83	8.84
$ 7,000 - $ 7,999	7.70	7.53	7.59	7.33	8.37	6.15	7.24	7.54
$ 8,000 - $ 8,999	6.54	6.36	6.39	6.26	6.78	5.61	6.65	6.46
$ 9,000 - $ 9,999	5.43	5.27	5.30	5.18	5.63	4.65	5.51	5.37
$10,000 - $14,999	20.02	18.23	17.09	22.10	19.30	19.02	23.67	21.29
$15,000 and over	12.28	9.41	8.39	12.59	11.04	15.17	17.59	11.15
Total[b/]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

a/ Vertical percent of dollar figures given in Table 24, columns 25 through 46, respectively.

b/ Columns may not sum to total due to rounding.

Table 25 (continued)

Income Bracket	(9) Medical Care	(10) Recreation	(11) Reading	(12) Other	(13) Fuel and Light	(14) Household Operation	(15) Other Travel	(16) Automobile
Under $ 2,000	7.52	4.94	14.67	2.05	13.71	14.04	3.79	1.25
$ 2,000 - $ 2,999	2.03	3.15	3.50	1.31	5.07	6.73	6.09	3.65
$ 3,000 - $ 3,999	9.27	5.42	4.91	2.50	4.90	7.40	7.81	5.88
$ 4,000 - $ 4,999	9.58	7.36	6.98	4.27	7.66	7.41	5.11	10.01
$ 5,000 - $ 5,999	10.36	4.12	5.39	13.88	10.39	7.86	8.22	9.25
$ 6,000 - $ 6,999	8.93	10.67	9.95	12.15	9.39	7.17	5.72	12.47
$ 7,000 - $ 7,999	7.45	9.34	8.20	9.60	8.19	7.23	5.40	9.52
$ 8,000 - $ 8,999	6.27	8.20	6.80	7.66	7.14	7.02	5.03	7.33
$ 9,000 - $ 9,999	5.20	6.79	5.65	6.36	5.93	5.82	4.17	6.09
$10,000 - $14,999	20.04	22.55	24.30	25.15	18.24	18.01	15.44	22.83
$15,000 and over	13.35	17.46	9.65	15.07	9.38	11.31	33.22	11.72
Total[b/]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table 25 (continued)

Income Bracket	(17) Education	(18) Furniture and Equipment	(19) Shelter All	(20) Shelter Rent	(21) Shelter Own	(22) Shelter Other	(23) All Expenditure Except - Shelter, Furniture and Education	(24) All Expenditure Except - Shelter, Furniture and Automobile
Under $ 2,000	2.07	6.98	11.00	16.33	5.03	--	7.75	6.72
$ 2,000 - $ 2,999	2.39	5.78	7.31	8.43	--	39.03	5.01	5.70
$ 3,000 - $ 3,999	.37	11.63	10.64	17.24	.62	11.15	7.49	8.90
$ 4,000 - $ 4,999	2.45	8.39	10.06	14.79	4.72	.60	8.52	9.85
$ 5,000 - $ 5,999	4.50	6.01	9.75	4.83	17.95	4.99	8.90	9.10
$ 6,000 - $ 6,999	9.30	9.33	8.21	9.26	7.59	2.63	9.24	10.01
$ 7,000 - $ 7,999	6.64	8.18	6.99	7.16	7.53	2.51	7.83	8.11
$ 8,000 - $ 8,999	4.74	7.20	5.99	5.59	7.24	2.35	6.67	6.66
$ 9,000 - $ 9,999	3.93	5.96	4.97	4.63	6.00	1.95	5.53	5.53
$10,000 - $14,999	45.15	22.00	16.17	10.08	24.92	18.09	20.10	19.46
$15,000 and over	18.46	8.54	8.91	1.66	18.40	16.70	12.96	9.96
Total[b/]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table 26

Component Taxes:
Allocations To Income Brackets By Use Of Income

(Thousands of Dollars)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Income Brackets	Fuel[a]		Public Utility[a]		Tobacco[b]	Liquor[b]	Corporate Income[b]
	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption			Extensive Shifting Assumption[d]
Under $ 2,000	90.2	856.9	255.7	400.9	25.5	--	136.6
$ 2,000 - $ 2,999	263.5	774.5	106.5	202.0	43.4	82.0	89.8
$ 3,000 - $ 3,999	424.5	1,184.6	107.8	251.0	202.0	320.4	134.7
$ 4,000 - $ 4,999	722.6	1,530.0	150.5	305.4	234.2	582.6	145.7
$ 5,000 - $ 5,999	667.8	1,509.9	207.4	366.1	227.2	321.9	149.2
$ 6,000 - $ 6,999	900.2	1,756.0	183.1	346.3	199.2	204.7	153.4
$ 7,000 - $ 7,999	687.2	1,413.2	160.7	298.9	159.5	188.2	130.0
$ 8,000 - $ 8,999	529.2	1,147.9	141.0	258.6	129.2	171.7	110.6
$ 9,000 - $ 9,999	439.6	953.3	117.0	214.6	107.3	142.3	91.8
$10,000 - $14,999	1,648.1	3,542.3	366.6	726.5	367.8	582.0	338.4
$15,000 and over	846.1	2,120.1	252.8	473.8	210.4	464.2	207.8
Total[c]	7,219.0	16,789.0	2,049.0	3,844.0	1,906.0	3,060.0	1,688.0

a/ Source: Table 46.

b/ Source: Table 1.

c/ Columns may not sum to totals due to rounding.

d/ Zero dollars shifted to Consumers under Conservative Shifting Assumption.

Table 26 (continued)

Income Brackets	(8) Property[e] Conservative Shifting Assumption	(9) Property[e] Extensive Shifting Assumption	(10) Bank[b] Extensive Shifting Assumption[d]	(11) Insurance[b]	(12) Personal Income[f]	(13) Estate and Inheritance[g]	(14) Unemployment Insurance[h]
Under $ 2,000	933.8	1,997.3	14.6	138.8	509.3	--	393.2
$ 2,000 - $ 2,999	529.6	1,164.7	9.6	91.3	976.6	--	652.9
$ 3,000 - $ 3,999	697.4	1,576.7	14.4	136.9	1,883.5	--	1,292.5
$ 4,000 - $ 4,999	699.0	1,609.0	15.6	148.1	2,107.5	--	2,009.6
$ 5,000 - $ 5,999	718.2	1,655.8	16.0	151.7	2,377.3	--	603.0
$ 6,000 - $ 6,999	622.8	1,501.5	16.4	156.0	2,637.1	--	--
$ 7,000 - $ 7,999	555.0	1,318.5	13.9	132.1	2,239.1	--	--
$ 8,000 - $ 8,999	492.7	1,156.7	11.8	112.4	2,383.5	--	--
$ 9,000 - $ 9,999	408.8	959.9	9.8	93.4	1,839.5	--	--
$10,000 - $14,999	1,302.5	3,184.9	36.3	344.0	5,932.4	440.1	--
$15,000 and over	738.2	1,844.7	22.3	211.2	6,984.7	202.9	--
Total[c]	7,698.0	17,970.0	181.0	1,716.0	29,871.0	643.0	4,951.0

e/ Source: Table 39.

f/ Source: Table 49.

g/ Source: Table 47.

h/ Source: Table 53.

Table 27

Taxes Assigned To Income Sources
Other Than Corporate Profits

(Thousands of Dollars)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Income Brackets	Rental Income		Noncorporate Business Profit					Estates and Trusts
	Excise[a]	Property[b]	Excise[a]		Property[b]		Fuel[e]	Property[f]
	Conservative Shifting Assumption[c]	Conservative Shifting Assumption[c]	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption[c]	Conservative Shifting Assumption[c]
Under $ 2,000	215.5	241.4	73.4	30.3	50.5	.7	95.0	30.9
$ 2,000 - $ 2,999	84.5	94.7	127.2	52.6	87.6	1.2	164.8	29.2
$ 3,000 - $ 3,999	150.2	168.2	115.1	47.6	79.2	1.1	149.1	30.9
$ 4,000 - $ 4,999	82.9	92.9	151.4	62.6	104.2	1.4	196.1	--
$ 5,000 - $ 5,999	124.8	139.8	220.1	91.0	151.5	2.1	285.0	14.7
$ 6,000 - $ 6,999	257.6	288.6	175.4	72.5	120.6	1.7	226.9	45.8
$ 7,000 - $ 7,999	220.0	246.5	153.8	63.6	105.8	1.4	199.1	50.1
$ 8,000 - $ 8,999	152.6	170.9	174.2	72.0	119.8	1.6	225.4	9.1
$ 9,000 - $ 9,999	126.1	141.3	149.4	61.8	102.9	1.4	193.6	5.0
$10,000 - $14,999	462.4	518.1	737.9	305.1	507.6	7.0	955.2	51.1
$15,000 and over	790.2	885.3	1,825.9	754.9	1,256.2	17.3	2,363.8	586.2
Total[d]	2,667.0	2,988.0	3,904.0	1,614.0	2,686.0	37.0	5,054.0	853.0

a/ Source: Table 36.

b/ Source: Total tax assigned given in Table 38. This total is distributed according to Noncorporate Business distributions given in Table 19.

c/ Zero dollars under Extensive Shifting Assumption (complete forward shifting).

d/ Columns may not sum to totals due to rounding.

e/ Source: Total tax assigned given in Table 45. This total is distributed according to Noncorporate Business distribution given in Table 19.

f/ Source: Table 39.

Note: Refer to Text, Chapter 6.

Table 28

Taxes Assigned To Income Sources Other Than Corporate Profits
After Federal Personal Income Tax Offset Adjustment

(Thousands of Dollars)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Income Brackets	Rental Income		Noncorporate Business Profit					Estates and Trusts
	Excise	Property	Excise		Property		Fuel	Fuel[c/]
	Conservative Shifting Assumption[a/]	Conservative Shifting Assumption[a/]	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption[a/]	No Shifting
Under $ 2,000	161.6	181.0	55.0	22.7	37.9	.5	71.2	30.9
$ 2,000 - $ 2,999	63.4	71.0	95.4	39.4	65.7	.9	123.6	29.2
$ 3,000 - $ 3,999	112.6	126.2	86.3	35.7	59.4	.8	111.8	30.9
$ 4,000 - $ 4,999	62.2	69.7	113.6	47.0	78.2	1.0	147.1	--
$ 5,000 - $ 5,999	93.6	104.8	165.1	68.2	113.6	1.6	213.8	14.7
$ 6,000 - $ 6,999	193.2	216.4	131.6	54.4	90.4	1.3	170.2	45.8
$ 7,000 - $ 7,999	165.0	184.9	115.4	47.7	79.4	1.0	149.3	50.1
$ 8,000 - $ 8,999	114.4	128.2	130.6	54.0	89.8	1.2	169.0	9.1
$ 9,000 - $ 9,999	94.6	106.0	112.0	46.4	77.2	1.0	145.2	5.0
$10,000 - $14,999	346.8	388.6	553.4	228.8	380.7	5.2	716.4	51.1
$15,000 and over	592.6	664.0	1,369.4	566.2	942.2	13.0	1,772.8	586.2
Total[b/]	2,000.0	2,241.0	2,928.0	1,211.0	2,015.0	28.0	3,790.0	853.0

a/ Zero dollars under Extensive Shifting Assumption.

b/ Columns may not sum to totals due to rounding.

c/ Source: Table 50.

Note: With the exception of column 8, each entry in this Table is obtained by taking .75 of the corresponding entry in Table 27. To get a realistic offset factor, we would have to know the by-bracket source distribution of the proportion of returns with itemized deductions. We have Federal data which provides us with the proportion of returns with itemized deductions. However, this data does not show a separate distribution (of the "itemization parameter") by income sources. Consequently, it was decided to apply the 25% uniformly. This is roughly equal to .85 X .32 where .85 is the top income bracket's itemization parameter, and .32 is that bracket's marginal personal income tax rate. It is recognized that this introduces a bias, and it is clear that this bias is in the direction of giving lower calculated tax rates for lower income brackets than would occur without the bias.

Table 29

Taxes Assigned To Corporate Profits

(Thousands of Dollars)

Income Brackets	(1) Corporate Income Tax[a] Conservative Shifting Assumption	(2) Corporate Income Tax[a] Extensive Shifting Assumption	(3) Excise Tax[b] Conservative Shifting Assumption	(4) Excise Tax[b] Extensive Shifting Assumption	(5) Bank Tax[c] Conservative Shifting Assumption	(6) Bank Tax[c] Extensive Shifting Assumption
Under $ 2,000	131.8	87.9	501.4	98.6	14.1	9.4
$ 2,000 - $ 2,999	85.6	57.1	325.7	64.0	9.2	6.1
$ 3,000 - $ 3,999	175.8	117.3	669.1	131.5	18.9	12.6
$ 4,000 - $ 4,999	142.9	95.3	543.5	106.8	15.3	10.2
$ 5,000 - $ 5,999	50.7	33.8	192.8	37.9	5.4	3.6
$ 6,000 - $ 6,999	255.4	170.4	971.8	191.0	27.4	18.3
$ 7,000 - $ 7,999	259.5	173.0	987.2	194.0	27.8	18.6
$ 8,000 - $ 8,999	199.7	133.2	759.6	149.3	21.4	14.3
$ 9,000 - $ 9,999	163.2	108.8	620.8	122.0	17.5	11.7
$10,000 - $14,999	600.0	400.2	2282.9	448.7	64.4	43.0
$15,000 and over	3003.3	2003.0	11426.4	2245.9	322.4	215.1
Total	5068.0	3380.0	19282.0	3790.0	544.0	363.0

a/ Source: Total for Conservative case given in Table 1; total for Extensive case is 2/3 of Conservative case (unshifted portion). These totals are allocated to the income brackets by the Dividend Distribution Pattern (See Table 19).

b/ Source: Table 35.

c/ Source: Total for Conservative case given in Table 1; total for Extensive case is 2/3 of Conservative case.

Table 29 (continued)

Income Brackets	(7) Fuel Tax[d] & [e] Conservative Shifting Assumption	(8) Public Utility[f] Conservative Shifting Assumption	(9) Property Tax[g] Conservative Shifting Assumption	(10) Property Tax[g] Extensive Shifting Assumption	(11) Total Conservative Shifting Assumption (1) + (3) + (5) + (7) + (9) + (11)	(12) Total Extensive Shifting Assumption (2) + (4) + (6) + (10) + (12)
Under $ 2,000	203.2	51.8	188.0	41.4	1090.3	237.3
$ 2,000 - $ 2,999	132.1	33.7	122.2	26.9	708.5	154.1
$ 3,000 - $ 3,999	271.1	69.2	250.9	55.3	1455.0	316.7
$ 4,000 - $ 4,999	220.5	56.2	203.9	45.0	1182.3	257.3
$ 5,000 - $ 5,999	78.2	20.0	72.3	15.9	419.4	91.2
$ 6,000 - $ 6,999	394.0	100.4	364.4	80.3	2113.4	460.0
$ 7,000 - $ 7,999	400.2	102.0	370.2	81.6	2146.9	467.2
$ 8,000 - $ 8,999	307.9	78.6	284.9	62.8	1652.1	359.6
$ 9,000 - $ 9,999	251.7	64.2	232.8	51.3	1350.2	293.8
$10,000 - $ 14,999	925.4	236.0	856.2	188.7	4964.9	1080.6
$15,000 and over	4631.7	1181.6	4285.1	944.6	24850.5	5408.6
Total	7816.0	1994.0	7231.0	1594.0	41935.0	9127.0

d/ See Table 45 and text, Chapter 6, regarding Fuel Tax.

e/ Zero dollars for Extensive Shifting case.

f/ Source: Table 46.

g/ Source: Totals given in Table 38.

Note: For 1960, taxable Corporate Income was $73,500,000 and $26,500,000 for Domestic and Foreign Corporations, respectively, i.e.; 73.5% and 26.5% of taxable income, respectively. Thus, 26.5% of Corporate Income accrue to foreign owners (not adjusting for Hawaiian ownership other than Domestic Corporations operating in Hawaii). Furthermore, it has been estimated that 40% of dividends distributed by Domestic Corporations flow out to non-resident shareholders. Consequently, 40% of taxable Corporate Income can be said to accrue to nonresidents, i.e., (.40)(.735) = .294 or 29.4%. Therefore, the sum of 26.4 and 29.4% or 55.8% represents Total Capital Outflow. In other words, 44.2% represents that portion which remains in Hawaii. An exception to this are Local Banks and Public Utilities. Here, all institutions are considered Domestic and Capital Outflow is only in the form of Dividend Outflow (40%). Thus, 60% remains in Hawaii.

Refer to text, Chapter 6.

Table 30

Taxes Assigned To Corporate Profits After
Capital Outflow Adjustment

(Thousands of Dollars)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Income Brackets	Corporate Income		Excise		Bank		Fuel	Public Utility	Property	
	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption[a/]	Conservative Shifting Assumption[a/]	Conservative Shifting Assumption	Extensive Shifting Assumption
Under $ 2,000	58.2	38.8	221.6	43.6	8.5	5.6	89.8	31.1	83.1	18.3
$ 2,000 - $ 2,999	37.8	25.2	144.0	28.3	5.5	3.7	58.4	20.2	54.0	11.9
$ 3,000 - $ 3,999	77.7	51.8	295.7	58.1	11.3	7.6	119.8	41.5	110.9	24.4
$ 4,000 - $ 4,999	63.2	42.1	240.2	47.2	9.2	6.1	97.5	33.7	90.1	19.9
$ 5,000 - $ 5,999	22.4	14.9	85.2	16.8	3.3	2.2	34.6	12.0	32.0	7.0
$ 6,000 - $ 6,999	112.9	75.3	429.5	84.4	16.4	11.0	174.1	60.2	161.1	35.5
$ 7,000 - $ 7,999	114.7	76.5	436.3	85.7	16.7	11.1	176.9	61.2	163.6	36.1
$ 8,000 - $ 8,999	88.3	58.9	335.7	66.0	12.9	8.6	136.1	47.2	125.9	27.8
$ 9,000 - $ 9,999	72.1	48.1	274.4	53.9	10.5	7.0	111.2	38.5	102.9	22.7
$10,000 - $14,999	265.2	176.9	1009.0	198.3	38.6	25.8	409.0	141.6	378.4	83.4
$15,000 and over	1327.4	885.3	5050.5	992.7	193.4	128.9	2047.2	709.0	1894.0	417.5
Total[b/]	2240.0	1494.0	8522.0	1675.0	326.0	218.0	3455.0	1196.0	3196.0	705.0

a/ Zero dollars for Extensive Shifting Assumption.

b/ Columns may not sum to totals due to rounding.

Note: Each entry comes from applying the Capital Outflow adjustment factor to the corresponding entry in Table 29. With the exception of the Bank tax and the Public Utility tax (whose factor is .60), the adjustment factor is .442, i.e., this proportion remains in Hawaii. See note on Table 29.

Table 31

Taxes Assigned To Corporate Profits After
Federal Corporate Income Tax Offset Adjustment

(Thousands of Dollars)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Income Brackets	Corporate Income		Excise		Bank		Fuel	Public Utility	Property	
	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption[a/]	Conservative Shifting Assumption[a/]	Conservative Shifting Assumption	Extensive Shifting Assumption
Under $ 2,000	65.9	44.0	250.7	49.3	7.0	4.7	101.6	25.9	94.0	20.7
$ 2,000 - $ 2,999	42.8	28.6	162.8	32.0	4.6	3.0	66.0	16.8	61.1	13.4
$ 3,000 - $ 3,999	87.9	58.6	334.6	65.8	9.5	6.3	135.6	34.6	125.4	27.6
$ 4,000 - $ 4,999	71.4	47.6	271.8	53.4	7.7	5.1	110.2	28.1	102.0	22.5
$ 5,000 - $ 5,999	25.4	16.9	96.4	19.0	2.4	1.8	39.1	10.0	36.2	8.0
$ 6,000 - $ 6,999	127.7	85.2	485.9	95.5	13.7	9.2	197.0	50.2	182.2	40.2
$ 7,000 - $ 7,999	129.8	86.5	493.6	97.0	13.9	9.3	200.1	51.0	185.1	40.8
$ 8,000 - $ 8,999	99.8	66.6	379.8	74.6	10.7	7.2	154.0	39.3	142.4	31.4
$ 9,000 - $ 9,999	81.6	54.4	310.4	61.0	8.8	5.8	125.8	32.1	116.4	25.6
$10,000 - $14,999	300.0	200.1	1141.4	224.4	32.2	21.5	462.7	118.0	428.1	94.4
$15,000 and over	1501.6	1001.5	5713.2	1123.0	161.2	107.5	2315.8	590.8	2142.6	472.3
Total[b/]	2534.0	1690.0	9641.0	1895.0	272.0	181.0	3908.0	997.0	3616.0	797.0

a/ Zero dollars assigned to Corporations under Extensive Shifting Assumption.

b/ Columns may not sum to totals due to rounding.

Note: Each entry in this Table is obtained by multiplying the corresponding entries in Table 29 by .50. This represents the application of a uniform Federal Corporate income tax rate of 50% to the deduction of State and Local tax payments for the calculation of Corporate taxable income.

Table 32

Taxes Assigned To Corporate Profits After Both Capital Outflow
And Federal Corporate Income Tax Offset Adjustments

(Thousands of Dollars)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Income Brackets	Corporate Income		Excise		Bank		Fuel	Public Utility	Property	
	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption[a]	Conservative Shifting Assumption[a]	Conservative Shifting Assumption	Extensive Shifting Assumption
Under $ 2,000	29.1	19.4	110.8	21.8	4.2	2.8	44.9	15.5	41.5	9.1
$ 2,000 - $ 2,999	18.9	12.6	72.0	14.1	2.2	1.8	29.2	10.1	27.0	5.9
$ 3,000 - $ 3,999	38.8	25.9	147.9	29.1	5.6	3.8	59.9	20.8	55.4	12.2
$ 4,000 - $ 4,999	31.8	21.1	120.1	23.6	4.6	3.0	48.7	16.9	45.1	9.9
$ 5,000 - $ 5,999	11.2	7.5	42.6	8.4	1.6	1.1	17.3	6.0	16.0	3.5
$ 6,000 - $ 6,999	56.4	37.6	214.8	42.2	8.2	5.5	87.1	30.1	80.5	17.7
$ 7,000 - $ 7,999	57.3	38.2	218.2	42.9	8.4	5.6	88.4	30.6	81.8	18.0
$ 8,000 - $ 8,999	44.1	29.4	167.9	33.0	6.4	4.3	68.0	23.6	63.0	13.9
$ 9,000 - $ 9,999	36.1	24.0	137.2	27.0	5.2	3.5	55.6	19.3	51.4	11.3
$10,000 - $14,999	132.6	88.4	504.5	99.2	19.3	12.9	204.5	70.8	189.2	41.7
$15,000 and over	663.7	442.7	2525.2	496.3	96.7	64.4	1023.6	354.5	947.0	208.8
Total[b]	1120.0	747.0	4261.0	838.0	162.0	109.0	1727.0	598.0	1598.0	352.0

[a] Zero dollars for Extensive Shifting Assumption.

[b] Columns may not sum to totals due to rounding.

Note: By combining the Capital Outflow with deductibility of Federal Corporate Income Tax, we get an adjustment factor of .221, or 22.1% [i.e., (.442)(.500)]. To obtain the entries in this Table, each entry, with the exception of those under Bank Tax and Public Utility, in Table 29, was multiplied by this adjustment factor. In the case of Bank Tax and Public Utility Tax, the entries were multiplied by .300 or 30.0% [i.e., (.600)(.500)] since the institutions are all considered to be domestic.

Table 33

Excise Tax: Estimation Of Dollar Amounts For Assignment
To Income Brackets By Sources And Use Of Income

Excise Tax Component	(1) Tax Base[a] (Thousands of Dollars)	(2) Visitor Expenditures[b] (Thousands of Dollars)	(3) Visitor Expenditures: Proportion of Tax Base (2) ÷ (1)	(4) Sales to Federal Government (Thousands of Dollars)	(5) Sales to Federal Government: Proportion of Tax Base (4) ÷ (1)
Retailing	792,348	75,980	.096	------	----
Services	185,036	16,890	.091	------	----
Retailing Plus Services	977,384	92,870	.095	------	----
Theater	22,110	------	----	------	----
Retailing Plus Services Plus Theater	999,494	92,870	.093	------	----
Consumption (Mfg.)	39,416	------	----	------	----
Rentals	142,380	30,130	.212	------	----
Contracting	231,859	------	.065	34,779	.150
Sugar	100,395	------	----	------	----
Pineapple	102,071	------	----	------	----
Interest	14,807	------	----	------	----
Commissions	43,073	-------	----	------	----
Public Utilities - Airlines	12,695	8,000	.630	------	----
Manufacturing	37,877	------	----	------	----
Wholesaling (including Compensation)	364,295	------	----	------	----
All Others[c]	Not entered[d]	------	----	------	----

a/ Source: Robert M. Kamins, Hawaii General Excise Tax; Legislative Reference Bureau Report, University of Hawaii, 1963.

b/ See Table 34.

c/ Insurance Solicitors, Producing, Blind, Interned, Service and Others, as listed by Director of Taxation in Statistical Report.

d/ Tax collection data entered, Table 37 unadjusted.

Note: See text, Chapter 6.

Table 33 (continued)

Excise Tax Component	(6) Tax Base: Proportion of Net to Gross (1) - (3) - (5)	(7) Assumptions of Shift to Consumers: Fixed Shifting Assumption	(8) Assumptions of Shift to Consumers: Conservative Shifting Assumption	(9) Assumptions of Shift to Consumers: Extensive Shifting Assumption	(10) Tax Collections[e/] (Thousands of Dollars)
Retailing	.904	100%	--	-----	29,584
Services	.909	100%	--	-----	6,663
Retailing Plus Services	.905	100%	--	-----	36,247
Theater	----	----	--	-----	764
Retailing Plus Services Plus Theater	.907	100%	--	-----	37,011
Consumption (Mfg.)	----	----	--	-----	1,568
Rentals	.788	----	0%	.835%	5,333
Contracting	.785	----	0%	.753%	9,363
Sugar	----	0%	--	-----	1,969
Pineapple	----	Exported	--	----	2,234
Interest	----	----	0%	100.00 %	576
Commissions	-----	----	0%	100.00 %	1,549
Public Utilities - Airlines	.370	100%	--	-----	444
Manufacturing	----	0%	--	-----	1,455
Wholesaling (including Compensation)	----	----	0%	-----	2,876
All Others[c/]	----	----	--	-----	1,370
					65,837

e/ Source: State of Hawaii, Director of Taxation, Statistical Report (mimeographed). Entries have been rounded to nearest thousands.

Table 33 (continued)

Excise Tax Component	(11)	(12)	(13)	(14)	(15)
	For Extensive Shifting Assumption			Excise Tax to be Allocated to Income Brackets by Use of Income	
	Wholesaling Imputation (Thousands of Dollars)	All Other Imputations (Thousands of Dollars)	Total (10) + (11) + (12)	Conservative Shifting Assumption (Thousands of Dollars) (6) X (10)	Extensive Shifting Assumption (Thousands of Dollars) (6) X (13) or (9) X (13)
Retailing	-----	-----	29,584	26,743.9	26,743.9
Services	-----	-----	6,663	6,056.7	6,056.7
Retailing Plus Services	1,662	1,370	39,279	32,803.5	35,547.5
Theater	-----	-----	764	--------	--------
Retailing Plus Services Plus Theater	-----	-----	40,043	33,568.9	36,319.0
Consumption (Mfg.)	-----	-----	1,568	--------	--------
Rentals	-----	-----	5,333	--------	4,453.1
Contracting	596	-----	9,959	--------	7,499.1
Sugar	-----	-----	1,969	--------	7,499.1
Pineapple	-----	-----	2,234	--------	--------
Interest	-----	-----	576	--------	576.0
Commissions	-----	-----	1,549	--------	1,549.0
Public Utilities - Airlines	-----	-----	444	164.3	164.3
Manufacturing	206 (No Shift)	-----	1,455	--------	--------
Wholesaling (including Compensation)	-----	-----	2,876	--------	--------
All others[c/]	-----	-----	1,370	--------	--------

Table 34

Visitor Expenditures

Calculations For Adjustment To Excise Tax

Expenditure Type	(1) Percent of Total Expenditure[a] (Including Inter-Island Air Travel)	(2) Dollar Amounts[b] (Thousands of Dollars)	(3) Relevant Excise Tax Component
Lodging	23	30,130	Rentals
Food, Entertainment, Beverages	31	40,610	Retail
Merchandise (Clothing, Gifts, Souvenirs)	24	31,440	Retail
Transportation	8	10,480	Service[c]
Photography	3	3,930	Retail
Personal Care	1	1,310	Services
Tour and Others	10	13,100	Services
Total	100[b]	131,000	

Visitor Expenditure Groupings[d]

(Thousands of Dollars)

Expenditure Type	(4) Retailing	(5) Rentals	(6) Services	(7) Public Utilities - Airlines	(8) Total
Lodging	---	30,130	---	---	30,130
Food, Entertainment, Beverages	40,610	---	---	---	40,610
Merchandise (Clothing, Gifts, Souvenirs)	31,440	---	---	---	31,440
Transportation	---	---	2,480	8,000[e]	10,480
Photography	3,930	---	---	---	3,930
Personal Care	---	---	1,310	---	1,310
Tour and Others	---	---	13,100	---	13,100
Total	75,980	30,130	16,890	8,000	131,000

a/ Source: Mr. M. Ono, "Survey of Visitor Expenditures", Economic Research Center, University of Hawaii, 1962.

b/ Estimated total = $131,000,000. This figure times the relevant per cent in Column 1, yields the dollar amounts.

c/ Inter-Island Air Travel is assigned to Public Utilities - airlines component of Excise Tax.

d/ These dollar amounts are each expressed as a per cent of the relevant tax base component in Appendix Table 33, Column 3, and then this per cent of the tax collection is deducted as the adjustment for Visitor Expenditures, e.g.:

$$\frac{\text{Visitor Retail Expenditures}}{\text{Retailing Excise Tax Base}} = \frac{75980}{792342} = .096.$$

e/ a = nonair travel.
b = inter-island airline travel.
c = all nontravel visitor expenditures.
From data: $\frac{a+b}{a+b+c} = .08$, $\frac{a}{a+c} = .02$, $a + b + c = \$131{,}000{,}000$

Therefore $b = \frac{8}{92}c - a = \frac{8}{92}c - \frac{1}{49}c = .92\ (131)\ (\frac{8}{92} - \frac{1}{49}) =$ $8,000,000 (approximate).

Table 35

Excise Tax
Assigned To Corporate Profits[a/]

(Thousands of Dollars)

Income Brackets	(1) Dividends Received Percent In Decimals	(2) Rental[b/] Conservative Shifting Assumption	(3) Contracting[b/] Conservative Shifting Assumption	(4) Interest[b/] Conservative Shifting Assumption	(5) Commission[b/] Conservative Shifting Assumption	(6) Sugar Fixed Shifting Assumption	(7) Manufacturing Fixed Shifting Assumption
Under $ 2,000	2.60	69.3	258.9	15.0	20.2	56.6	21.6
$ 2,000 - $ 2,999	1.69	45.0	168.3	9.7	13.1	36.8	14.0
$ 3,000 - $ 3,999	3.47	92.5	345.6	20.0	26.9	75.5	28.8
$ 4,000 - $ 4,999	2.82	75.2	280.8	16.2	21.8	61.3	23.4
$ 5,000 - $ 5,999	1.00	26.6	99.6	5.8	7.8	21.8	8.3
$ 6,000 - $ 6,999	5.04	134.4	501.9	29.0	39.1	109.6	41.9
$ 7,000 - $ 7,999	5.12	136.5	509.9	29.5	39.7	111.4	42.5
$ 8,000 - $ 8,999	3.94	105.0	392.4	22.7	30.5	85.7	32.7
$ 9,000 - $ 9,999	3.22	85.8	320.7	18.5	25.0	70.0	26.8
$10,000 - $14,999	11.84	315.6	1179.1	68.2	91.8	257.5	98.4
$15,000 and over	59.26	1579.9	5901.7	341.3	459.3	1288.9	492.4
Total	100.00	2666.0	9959.0	576.0	775.0	2175.0	831.0

a/ The total dollar amounts for each relevant Excise Tax component were allocated to the Income Brackets via the Dividend Distribution Pattern, Column 1.

b/ Zero dollars in the Extensive Shifting Assumption case due to 100% forward shifting.

Note: See text, Chapter 6.

Table 35 (continued)

Income Brackets	(8) All Others[b/] Conservative Shifting Assumption	(9) Wholesaling Imputation[b/] Conservative Shifting Assumption	(10) Consumption (As Manufacturing) Fixed Shifting Assumption	(11) Total Conservative Shifting Assumption (2) + (3) + (4) + (5) + (6) + (7) + (8) + (9) + (10)	(12) Total Extensive Shifting Assumption (6) + (7) + (10)
Under $ 2,000	17.8	21.6	20.4	501.4	98.6
$ 2,000 - $ 2,999	11.6	14.0	13.2	325.7	64.0
$ 3,000 - $ 3,999	23.8	28.8	27.2	669.1	131.5
$ 4,000 - $ 4,999	19.3	23.4	22.1	543.5	106.8
$ 5,000 - $ 5,999	6.8	8.3	7.8	192.8	37.9
$ 6,000 - $ 6,999	34.5	41.9	39.5	971.8	191.0
$ 7,000 - $ 7,999	35.1	42.5	40.1	987.2	194.0
$ 8,000 - $ 8,999	27.0	32.7	30.9	759.6	149.3
$ 9,000 - $ 9,999	22.0	26.8	25.2	620.8	122.0
$10,000 - $14,999	81.1	98.4	92.8	2282.9	448.7
$15,000 and over	405.9	492.4	464.6	11426.4	2245.9
Total	685.0	831.0	784.0	19281.2	3790.0

Table 36

Excise Tax Assigned To Income Sources
Other Than Corporate Profits

(All in Thousands of Dollars)

Income Bracket	(1) Rental Income Distribution[a] (Percent)	(2) Rental[b] Conservative Shifting Assumption	(3) Noncorporate Business Income Distribution[c] (Percent)	(4) Contracting[d] & [e] Extensive Shifting Assumption	(5) Commissions[e] Conservative Shifting Assumption	(6) Manufacturing[e] Fixed Shifting Assumption	(7) All Other[e] Conservative Shifting Assumption	(8) Wholesaling[e] Conservative Shifting Assumption	(9) Consumption (As Manufacturing) Fixed Shifting Assumption	(10) Total Conservative Shifting Assumption Sum (2) + (5) + (7) + (9)	(11) Total Extensive Shifting Assumption Sum (6) + (9)
Under $ 2,000	8.08	215.5	1.88	$0	14.6	15.6	12.9	15.6	14.7	73.4	30.3
$ 2,000 - $ 2,999	3.17	84.5	3.26		25.2	27.0	22.3	27.1	25.6	127.2	52.6
$ 3,000 - $ 3,999	5.63	150.2	2.95		22.8	24.5	20.2	24.5	23.1	115.1	47.6
$ 4,000 - $ 4,999	3.11	82.9	3.88		30.0	32.2	26.6	32.2	30.4	151.4	62.6
$ 5,000 - $ 5,999	4.68	124.8	5.64		43.6	46.8	38.6	46.9	44.2	220.1	91.0
$ 6,000 - $ 6,999	9.66	257.6	4.49		34.8	37.3	30.8	37.3	35.2	175.4	72.5
$ 7,000 - $ 7,999	8.25	220.0	3.94		30.5	32.7	27.0	32.7	30.9	153.8	63.6
$ 8,000 - $ 8,999	5.72	152.6	4.46		34.5	37.0	30.6	37.1	35.0	174.2	72.0
$ 9,000 - $ 9,999	4.73	126.1	3.83		29.6	31.8	26.2	31.8	30.0	149.4	61.8
$10,000 - $14,999	17.34	462.4	18.90		146.3	156.9	129.5	157.0	148.2	737.9	305.1
$15,000 and over	29.63	790.2	46.77		362.0	388.2	320.4	388.6	366.7	1825.9	754.9
Total	100.00	2667.0	100.00		774.0	830.0	685.0	831.0	784.0	3904.0	1614.0

a/ See Appendix Table 19.

b/ Dollar total for Conservative Shifting Case allocated via Rental Income Distribution, column 1, and zero dollar total for Extensive Shifting Case.

c/ Used to allocate dollar totals of columns 4, 5, 6, 7, 8 and 9. See Appendix Table 19.

d/ See text, Chapter 6, page 81, regarding the assumption that Construction is Corporate activity.

e/ Zero dollars for Extensive Shifting Assumption.

Table 37

Excise Tax:
Allocation To Income Brackets By Use Of Income

Income Brackets	(1)	(2)	(3)	(4)	(5)
	Expenditure Pattern Series (Percent Distribution)a/				
	All Goods and Services (Percent)	All Goods and Services Except Housing (Percent)	Home Operation, Furniture, and Automobile (Percent)	Home Operation and Improvement (Percent)	Other Travel (Percent)
Under $ 2,000	8.09	7.75	6.72	12.13	3.79
$ 2,000 - $ 2,999	5.32	5.01	5.70	6.88	6.09
$ 3,000 - $ 3,999	7.98	7.49	8.90	9.06	7.81
$ 4,000 - $ 4,999	8.63	8.52	9.85	9.08	5.11
$ 5,000 - $ 5,999	8.84	8.90	9.10	9.33	8.22
$ 6,000 - $ 6,999	9.09	9.24	10.01	8.09	5.72
$ 7,000 - $ 7,999	7.70	7.83	8.11	7.21	5.40
$ 8,000 - $ 8,999	6.55	6.67	6.66	6.40	5.03
$ 9,000 - $ 9,999	5.44	5.53	5.53	5.31	4.17
$10,000 - $14,999	20.05	20.10	19.46	16.92	15.44
$15,000 and over	12.31	12.96	9.96	9.59	33.22
Total	100.00	100.00	100.00	100.00	100.00

a/ Source: Appendix Table 25.

Table 37 (continued)

(All in Thousands of Dollars)

Income Bracket	(6) Retailing, Services and Theater[b/]	(7) Public Utilities--Airlines[c/]	(8) Excise Tax, (Total) Conservative Assumption Sum (6) + (7)	(9) Contracting[d/]	(10) Contracting[e/]	(11) Rental[d/]	(12) Rental[e/]
Under $ 2,000	2601.6	6.2	2607.8	505.3	269.6	305.9	156.2
$ 2,000 - $ 2,999	1681.8	10.0	1691.8	286.6	177.3	173.5	102.7
$ 3,000 - $ 3,999	2514.3	12.8	2527.1	377.4	266.0	228.5	154.1
$ 4,000 - $ 4,999	2860.1	8.4	2868.5	378.2	287.6	229.0	166.6
$ 5,000 - $ 5,999	2987.6	13.5	3001.1	388.7	294.6	235.3	170.7
$ 6,000 - $ 6,999	3101.8	9.4	3111.2	337.0	303.0	204.0	175.5
$ 7,000 - $ 7,999	2628.4	8.8	2637.2	300.3	256.6	181.8	148.7
$ 8,000 - $ 8,999	2239.0	8.2	2247.2	266.6	218.3	161.4	126.5
$ 9,000 - $ 9,999	1856.4	6.8	1863.2	221.2	181.3	133.9	105.0
$10,000 - $14,999	6747.4	25.3	6772.7	704.9	668.3	426.7	387.2
$15,000 and over	4350.5	54.5	4405.0	399.6	410.3	241.8	237.7
Total	33569.0	164.0	33733.0	4166.0	3333.0	2522.0	1931.0

b/ Allocated according to column 2.

c/ Allocated according to column 5.

d/ Allocated according to column 4.

e/ Allocated according to column 1.

Table 37 (continued)

(All in Thousands of Dollars)

Income Bracket	(13) Interest[f/]	(14) Commissions[e/]	(15) Wholesaling Imputation[e/]	(16) All Other Excise Tax[e/]	(17) Excise Tax, (Total) Extensive Assumption Sum (8) + (9) + (10) + (11) + (12) + (13) + (14) + (15) + (16)
Under $ 2,000	38.7	125.3	121.9	100.6	4231.3
$ 2,000 - $ 2,999	32.8	82.4	80.2	66.1	2693.4
$ 3,000 - $ 3,999	51.3	123.6	120.2	99.2	3947.4
$ 4,000 - $ 4,999	56.7	133.7	130.0	107.3	4357.6
$ 5,000 - $ 5,999	52.4	136.9	133.2	109.9	4522.8
$ 6,000 - $ 6,999	57.6	140.8	137.0	113.0	4579.1
$ 7,000 - $ 7,999	46.7	119.3	116.0	95.7	3902.3
$ 8,000 - $ 8,999	38.4	101.4	98.7	81.4	3339.0
$ 9,000 - $ 9,999	31.8	84.3	82.0	67.6	2770.3
$10,000 - $14,999	112.1	310.6	302.2	249.2	9933.9
$15,000 and over	57.4	190.7	185.5	153.0	6281.0
Total	576.0	1549.0	1507.0	1243.0	50560.0

f/ Allocated according to column 3.

Table 38

Property Tax: Allocation To Property Use And Assignment
To Source And Use Of Income Categories

(Thousands of Dollars)

	Conservative Shifting Assumption					Extensive Shifting Assumption					
	Income Sources				Income Use	Income Sources			Income Uses		
	Corporate Profits	Rental Income	Noncorporate Business	Estates And Trusts	Housing	Corporate Profits	Noncorporate Business	Estates And Trusts	Housing	All Goods And Services	Food
Home Owner (FxS_1)	----	----	----	---	7698	----	--	---	7698	----	---
Home Renter (FxS_2)	1802	1802	----	---	----	----	--	---	3605	----	---
Apartment or Hotel Renter (FxS_3)	1186	1186	----	---	----	----	--	---	1868[a/]	----	---
Commercial and Industrial (FxS_4)	2492	----	2492	---	----	----	--	---	----	4983	---
Sugar (FxS_5)	1434	----	----	---	----	1434	--	---	----	----	---
Ranch (FxS_5)	157	----	157	---	----	----	--	---	----	----	314
Conservation (FxS_6)	160	----	37	853	----	160	37	853	----	----	---
Sub-Total	7231	2988	2686	853	7698	1594	37	853	13171	4983	314
Total - 21,456						Total - 21455[b/]					

a/ Excluding Visitor Sales of $502,000.

b/ Including Visitor Sales of $502,000.

Note: $F = \frac{T}{A}$ = Average Property Tax rate.

T = Statewide total Property Tax revenue

A = Statewide total of all classifications of land and buildings assessed valuation net of exemptions.

S = Various classifications for the purpose of this study. For definitions, see text, Chapter 6, page 87. For dollar figures, see Table 40.

Table 39

Property Tax: Allocation To Income Brackets
By Property Use And By Source And Use Of Income

(Thousands of Dollars)

Income Brackets	(1) HOME-OWNER	(2) HOUSING Home Renter Conservative Shifting Assumption[a]	(3) HOUSING Home Renter Conservative Shifting Assumption[a]	(4) HOUSING Home Renter Extensive Shifting Assumption[b]	(5) HOUSING Apartment Or Hotel Renter Conservative Shifting Assumption[a]	(6) HOUSING Apartment Or Hotel Renter Conservative Shifting Assumption[a]	(7) HOUSING Apartment Or Hotel Renter Extensive Shifting Assumption[b]
	FxS_1	$FxS_2(.5)$	$FxS_2(.5)$	FxS_2	$FxS_3(.5)$	$FxS_3(.5)$	$FxS_3(.788)$
Under $ 2,000	933.8	46.9	145.7	437.2	30.8	95.8	226.6
$ 2,000 - $ 2,999	529.6	30.5	57.1	247.9	20.0	37.5	128.6
$ 3,000 - $ 3,999	697.5	62.5	101.5	326.6	41.2	66.7	169.2
$ 4,000 - $ 4,999	699.0	50.9	56.0	327.3	33.5	36.9	169.6
$ 5,000 - $ 5,999	718.3	18.1	84.3	336.4	11.9	55.5	174.2
$ 6,000 - $ 6,999	622.7	90.8	174.1	291.6	59.8	114.5	151.2
$ 7,000 - $ 7,999	555.0	92.3	148.6	259.8	60.7	97.8	134.8
$ 8,000 - $ 8,999	492.7	71.0	103.0	230.7	46.7	67.8	119.6
$ 9,000 - $ 9,999	408.8	58.0	85.2	191.4	38.2	56.0	99.2
$10,000 - $14,999	1302.5	213.4	312.5	609.9	140.4	205.4	316.1
$15,000 and over	738.2	1068.1	534.0	345.7	702.7	351.3	179.1
Total[c]	7698.0	1802.0	1802.0	3605.0	1186.0	1186.0	1868.0

a/ Zero shift from Owner to Renter.

b/ One hundred per cent shift to Renter.

c/ Columns may not sum to totals due to rounding.

Note: Dollar totals (in thousands of dollars) are from Table 38. In this Table, totals are allocated to the income brackets using either the Distribution Patterns for income sources or the Expenditure Patterns for income uses. See text, Chapter 6.

Table 39 (continued)

Income Brackets	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	COMMERCIAL AND INDUSTRIAL			AGRICULTURAL				
				Sugar	Pineapple[f]	Ranch		
	Conservative Shifting Assumption[d]		Extensive Shifting Assumption[e]			Conservative Shifting Assumption[d]		Extensive Shifting Assumption[e]
	$FxS_4(.5)$	$FxS_4(.5)$	FxS_4	$FxS_5(.662)$	$FxS_5(.193)$	$FxS_5(.145)(.5)$	$FxS_5(.145)(.5)$	$FxS_5(.145)$
Under $ 2,000	64.7	46.8	410.1	37.2		4.1	3.0	36.8
$ 2,000 - $ 2,999	42.1	81.2	264.1	24.2		2.6	5.1	19.8
$ 3,000 - $ 3,999	86.4	73.5	396.1	49.7		5.4	4.6	25.4
$ 4,000 - $ 4,999	70.2	96.7	429.1	40.4		4.4	6.0	26.0
$ 5,000 - $ 5,999	24.9	140.5	440.0	14.3		1.5	8.8	30.5
$ 6,000 - $ 6,999	125.5	111.9	453.9	72.2		7.9	7.0	28.2
$ 7,000 - $ 7,999	127.6	98.2	383.7	73.4		8.0	6.2	23.7
$ 8,000 - $ 8,999	98.2	111.1	325.9	56.5		6.2	7.0	19.9
$ 9,000 - $ 9,999	80.3	95.5	270.6	46.1		5.1	4.8	16.5
$10,000 - $14,999	295.0	470.9	997.6	169.8		18.6	29.6	57.2
$15,000 and over	1477.7	1165.3	611.9	849.5		92.9	73.3	29.6
Total[c]	2492.0	2492.0	4983.0	1434.0		157.0	157.0	314.0

d/ Zero forward shift to Consumers.

e/ One hundred per cent forward shift to Consumers.

f/ A total of $417,000 assumed to be "exported via Export Sales.

Table 39 (continued)

Income Brackets	(16)	(17)	(18)
	C O N S E R V A T I O N		
	Estate and Trusts	Corporate Profits	Noncorporate Business
	$FxS_6(.812)$	$FxS_6(.152)$	$FxS_6(.036)$
Under $ 2,000	30.8	4.2	.7
$ 2,000 - $ 2,999	29.3	2.6	1.2
$ 3,000 - $ 3,999	30.8	5.5	1.1
$ 4,000 - $ 4,999	----	4.5	1.4
$ 5,000 - $ 5,999	14.6	1.5	2.1
$ 6,000 - $ 6,999	45.8	8.0	1.6
$ 7,000 - $ 7,999	50.1	8.1	1.4
$ 8,000 - $ 8,999	9.1	6.3	1.6
$ 9,000 - $ 9,999	5.1	5.2	1.4
$10,000 - $14,999	51.1	18.9	7.0
$15,000 and over	586.4	94.6	17.5
Total[c/]	853.0	160.0	37.0

Table 40

Taxable Assessed Value Of Real Property

By Land Use Classes

Land Use Classes	Land and Building in Thousands of Dollars					
	Oahu	Maui	Hawaii	Kauai	Total	"S" Designation[b]
Residential w/ Exemption						
Fee w/ Exemption	552,992	24,728	26,439	14,489		
Lease w/ Exemption	173,365	393	1,536	111		
Partial Exemption	3,535	1,570	34	106		
Total	729,892	26,691	28,009	14,706	799,298	S_1
Residential w/o Exemption	341,588	12,560	12,822	7,245	374,215	S_2
Hotel/Apartment	233,778	3,463	4,224	4,656	246,121	S_3
Commercial	370,148	10,390	15,488	5,986		
Industrial	97,407	3,463	8,448	5,987		
Total	467,555	13,853	23,936	11,973	517,317	S_4
Agricultural	77,407	51,950	52,095	23,281	224,733	S_5
Conservation	77,926	6,927	19,711	4,656	109,220	S_6
Total					2,270,904	A

a/ Director of Taxation, Annual Report, 1963, Pages 20 - 22.

b/ Refer to Chapter 6, page 87.

Table 41

Proportion Of Housing Which Is Owner Occupied
(By Assessed Value)

(Thousands of Dollars)

	Housing Residential and Apartment/Hotel	Oahu			State (includes Oahu)		
		Land	Building	Total	Land	Building	Total
(1)	Rental:						
(2)	Residential without exemption	$215,200	$126,388	$ 341,588	$ 230,261	$143,954	$ 374,215
(3)	Hotel/Apartment	123,902	109,876	233,778	128,721	117,400	246,121
(4)	Rental Sub-Total	$339,102	$236,264	$ 575,366	$ 358,982	$261,354	$ 620,336
(5)	Nonrental:						
(6)	Fee with exemption	$398,154	$154,838	$ 552,992	$ 433,873	$184,775	$ 618,648
(7)	Lease with exemption	102,285	71,080	173,365	103,455	71,950	175,405
(8)	Partial exemption	1,874	1,661	3,535	2,919	2,326	5,245
(9)	Net Nonrental Sub-Total	$502,313	$227,579	$ 729,892	$ 540,247	$259,051	$ 799,298
(10)	Exemption	---	---	148,900	---	---	193,300
(11)	Gross Nonrental Sub-Total			$ 878,792			$ 992,598
(12)	Total: Rental and Gross Nonrevenue			$1,454,158			$1,612,934
	Lines 11/12			.604			.615
(13)	Percent of Nonrental Sub-Total	68.8%	31.2%		67.6%	32.4%	
(14)	Amount of Exemptions	$102,443	$ 46,457		$ 130,671	$ 62,629	
(15)	Gross Nonrental Sub-Total	604,756	274,036		670,918	321,680	
(16)	Total: Rental and Gross Nonrental	943,858	510,300		1,029,900	583,034	
(17)	Lines 15/16	.641	.537		.651	.552	

Data Source: State of Hawaii, Department of Taxation, Annual Report, 1962 - 63, pages 19 - 22.

Note: Refer to text, Chapter 6.

Table 42

Proportion Of Building Stock
Which Is Used For Housing

(Thousands of Dollars)

		Oahu	Maui	Hawaii	Kauai	Total
(1)	Residential	353,967	20,352	19,680	9,006	403,005
(2)	Hotel/Apartment	109,876	2,251	2,619	2,654	117,400
(3)	Sub-Total	463,843	22,603	22,299	11,660	520,405
(4)	Commercial	148,059	6,026	8,673	3,592	166,350
(5)	Industrial	29,222	2,528	5,660	3,951	41,361
(6)	Agricultural	22,404	10,909	9,377	5,355	48,045
(7)	Conservation	3,896	831	266	1,071	6,064
(8)	Sub-Total	203,581	20,294	23,976	13,969	261,820
(9)	Total	667,424	42,897	46,275	25,629	782,225
(10)	Lines (3) and (9)	69.5%	52.7%	48.2%	45.5%	66.5%

Data Source: State of Hawaii, Department of Taxation, Annual Report 1962 - 63, pages 20 - 22.

Note: Refer to text, Chapter 6.

Table 43

Gross Valuations Of Agricultural
Real Property

(State As A Whole)

		January 1, 1960	January 1, 1961	Total of January 1, 1960 and January 1, 1961
(1)	Sugar	$134,183,000	$127,565,000	$261,748,000
(2)	Pineapple	38,318,000	37,970,000	76,288,000
(3)	Ranch	28,383,000	28,794,000	57,177,000
(4)	Total	$200,884,000	$194,329,000	$395,213,000
Line (1)/(4)		66.8%	65.7%	66.2%
Line (2)/(4)		19.1%	19.5%	19.3%
Line (3)/(4)		14.1%	14.8%	14.5%

Data Source: Government in Hawaii, 1961, page 26; and 1962, page 23.

Note: Refer to text, Chapter 6.

Table 44

Fuel Tax: Revenue By Source[a/]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Gasoline	Diesel	Butane	Aviation Fuel	Small Boat	Fuel Retail Permits	Motor Vehicle Registration Fee	Total
							(Thousands of Dollars)	
State	7,319,027	---	---	---	---	---	---	
Counties	5,098,963	---	---	---	---	---	---	
Nonhighway	---	279,967	1,377	2,761,145	---	---	---	
Highway	---	211,501	4,464	---	---	---	---	
Auto, including taxi	---	---	---	---	---	---	3,206	
Bus	---	---	---	---	---	---	40	
Truck	---	---	---	---	---	---	1,539	
Trailer	---	---	---	---	---	---	201	
Cycles (personal)	---	---	---	---	---	---	8	
								$20,710,293
								- 620,899 Visitor Sales
Total	12,417,990	491,468	5,841	2,761,145	37,269	2,580	4,994	$20,089,394

a/ Sales to government are tax exempt.

Data Source: Director of Taxation, State of Hawaii, Annual Report - 1960.

Note: Refer to text, Chapter 6.

Table 45

Fuel Tax: Assignment To Business And Nonbusiness Sectors

(Dollars)

	(1)	(2)	(3)
	Dollars of Tax: Allocation		
	Business	Nonbusiness	Total
Gasoline	6,208,995	6,208,995	
		X .9 (Local share)	
		5,588,096	
Diesel	491,468		
Butane	5,841		
Small Boat	18,634	18,634	
Fuel Retail Permits	1,290	1,290	
Automobile Registration	1,603,000	1,603,000	
Truck and Bus Registration	1,780,000		
Cycle Registration		8,000	
Local Air Fuel	264,808		
Nonlocal Air Fuel	2,496,337		
Total	12,870,373	7,219,021	20,089,394

Note: Refer to text, Chapter 6.

Table 46

Allocation Of Miscellaneous Taxes To Income Brackets

(Thousands of Dollars)

Income Brackets	(1)	(2)	(3)	(4)	(5)	(6)
	Nonbusiness Portion of Fuel Tax					
	Gasoline and Others[a]		Aviation Fuel[b]		Nonbusiness Total	
	Conservative Shifting Assumption	Extensive Shifting Assumption	Local Airlines Extensive Shifting Assumption[c]	Nonlocal Airlines Extensive Shifting Assumption[c]	Conservative Shifting Assumption (1)	Extensive Shifting Assumption (2) + (3) + (4)
Under $ 2,000	90.2	748.8	3.7	14.2	90.2	856.9
$ 2,000 - $ 2,999	263.5	482.2	6.0	22.8	263.5	774.5
$ 3,000 - $ 3,999	424.5	723.3	7.6	29.2	424.5	1184.6
$ 4,000 - $ 4,999	722.6	783.3	5.0	19.1	722.6	1530.0
$ 5,000 - $ 5,999	667.8	803.4	8.0	30.7	667.8	1509.9
$ 6,000 - $ 6,999	900.2	828.8	5.6	21.4	900.2	1756.0
$ 7,000 - $ 7,999	687.2	700.5	5.3	20.2	687.2	1413.2
$ 8,000 - $ 8,999	529.2	595.0	4.9	18.8	529.2	1147.9
$ 9,000 - $ 9,999	439.6	494.0	4.1	15.6	439.6	953.3
$10,000 - $14,999	1648.1	1821.4	15.1	57.7	1648.1	3542.3
$15,000 and over	846.1	1117.2	32.6	124.2	846.1	2120.1
Total[d]	7219.0	9098.0	98.0	374.0	7219.0	16789.0

a/ Allocated via Automobile Expenditure pattern. See Table 25.

b/ Allocated via Other Travel Expenditure pattern. See Table 25.

c/ Conservative shifting assumption treated in Table 29.

d/ Columns may not sum to totals due to rounding.

Table 46 (continued)

Income Brackets	(7) Business Portion of Public Utility Tax: Gas, Electricity and Telephone[e] Conservative Shifting Assumption	(8) Nonbusiness Portion of Public Utility Tax: Gas, Electricity and Telephone: Conservative Shifting Assumption[f]	(9) Nonbusiness Portion of Public Utility Tax: Gas, Electricity and Telephone: Extensive Shifting Assumption[g] (Shifted Portion only)	(10) Nonbusiness Portion of Public Utility Tax: Surface Transportation: Conservative Shifting Assumption[h]	(11) Nonbusiness Total: Conservative Shifting Assumption (8) + (10)	(12) Nonbusiness Total: Extensive Shifting Assumption (9) + (11)
Under $ 2,000	51.8	246.1	145.2	9.6	255.7	400.9
$ 2,000 - $ 2,999	33.7	91.0	95.5	15.5	106.5	202.0
$ 3,000 - $ 3,999	69.2	88.0	143.2	19.8	107.8	251.0
$ 4,000 - $ 4,999	56.2	137.5	154.9	13.0	150.5	305.4
$ 5,000 - $ 5,999	20.0	186.5	158.7	20.9	207.4	366.1
$ 6,000 - $ 6,999	100.4	168.6	163.2	14.5	183.1	346.3
$ 7,000 - $ 7,999	102.0	147.0	138.2	13.7	160.7	298.9
$ 8,000 - $ 8,999	78.6	128.2	117.6	12.8	141.0	258.6
$ 9,000 - $ 9,999	64.2	106.4	97.6	10.6	117.0	214.6
$10,000 - $14,999	236.0	327.4	359.9	39.2	366.6	726.5
$15,000 and over	1181.6	168.4	221.0	84.4	252.8	473.8
Total[d]	1994.0	1795.0	1795.0	254.0	2049.0	3844.0

e/ Allocated via Dividend Distribution pattern. See Table 19.

f/ Allocated via Fuel and Light Expenditure pattern. See Table 25.

g/ Allocated via All Goods and Services Expenditure pattern. See Table 25.

h/ Allocated via Other Travel Expenditure pattern. Visitor Sales ignored.

Table 47

Estate And Inheritance Tax

(Thousands of Dollars)

(1)	(2)	(3)	(4)
Income Bracket	State Estate and Inheritance Tax[a]	Federal Credit[b]	Net: (2) - (3)
Under $ 2,000			
$ 2,000 - $ 2,999			
$ 3,000 - $ 3,999			
$ 4,000 - $ 4,999			
$ 5,000 - $ 5,999			
$ 6,000 - $ 6,999			
$ 7,000 - $ 7,999			
$ 8,000 - $ 8,999			
$ 9,000 - $ 9,999			
$10,000 - $14,999[c]	529.0	188.9	440.1
$15,000 and over [c]	471.0	168.1	202.9
Total	1000.0	357.0	643.0

a/ Director of Taxation, statistical mimeograph, and Annual Report - 1960.

b/ Internal Revenue Service, Statistics of Income 1960 - Fiduciary, Gift and Estate Tax Returns, page 57.

c/ Of the A.G.I. in brackets $10,000 and over, 52.9% is in the $10,000 - $14,999 bracket, and 47.1% is in the $15,000 and over bracket.

Table 48

Calculation Of Marginal Average
Federal Personal Income Tax Rate

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Income Brackets	Number of Returns[a]	A.G.I.[a] (Thousands of Dollars)	Federal Tax Liability[a] (Thousands of Dollars)	Average A.G.I. (2) ÷ (1) (Thousands of Dollars)	Average Federal Tax Liability (3) ÷ (1) (Thousands of Dollars)	Change in Average A.G.I.[b] (Thousands of Dollars)	Change in Average Federal Tax Liability[b] (Thousands of Dollars)	Marginal Average Federal Tax Rate (7) ÷ (6) (Percent)
Under $ 2,000	32,623	41,288	3,331	1.26	.10	1.26	.10	8.0
$ 2,000 - $ 2,999	21,778	52,955	5,570	2.43	.26	1.17	.16	14.0
$ 3,000 - $ 3,999	26,375	91,891	9,428	3.48	.36	1.05	.10	10.0
$ 4,000 - $ 4,999	22,570	101,162	10,711	4.48	.47	1.00	.11	11.0
$ 5,000 - $ 5,999	22,204	120,295	11,904	5.42	.54	.94	.07	7.0
$ 6,000 - $ 6,999	17,306	112,456	12,109	6.50	.70	1.08	.16	15.0
$ 7,000 - $ 7,999	11,727	87,236	10,020	7.44	.85	.94	.15	16.0
$ 8,000 - $ 8,999	11,707	98,867	11,580	8.44	.99	1.00	.14	14.0
$ 9,000 - $ 9,999	8,008	76,512	9,002	9.55	1.12	1.11	.13	12.0
$10,000 - $14,999	15,525	182,317	25,282	11.74	1.63	2.19	.51	23.0
$15,000 and over	6,404	183,550	45,513	28.66	7.11	16.92	5.48	32.0
Total	196,227	1,148,529	154,450	-----	----	-----	----	----

a/ Source: Internal Revenue Service, Statistics of Income, 1960, Table 17 (Taxable returns only), page 80.

b/ From lower to higher income bracket.

Table 49

Federal Personal Income Tax Offset
For Hawaii Personal Income Tax

Income Brackets	(1) Number of Taxable and nontaxable Returns[a]	(2) Number of Taxable and Nontaxable Returns with any Tax Deductions[b]	(3) Proportion in Percent (2) ÷ (1)	(4) Marginal Average Federal Tax Rate[c] (Percent)
Under $ 2,000	14,875,338	1,190,488	8.00	8.0
$ 2,000 - $ 2,999	6,924,131	1,695,784	24.50	14.0
$ 3,000 - $ 3,999	6,877,017	2,298,492	33.42	10.0
$ 4,000 - $ 4,999	6,866,523	2,861,598	41.67	11.0
$ 5,000 - $ 5,999	6,422,593	3,351,218	52.18	7.0
$ 6,000 - $ 6,999	5,291,911	3,090,497	58.40	15.0
$ 7,000 - $ 7,999	3,888,676	2,366,342	60.85	16.0
$ 8,000 - $ 8,999	2,757,554	1,741,911	63.17	14.0
$ 9,000 - $ 9,999	1,905,564	1,205,974	63.29	12.0
$10,000 - $14,999	3,641,612	2,452,500	67.35	23.0
$15,000 and over	1,677,012	1,411,641	84.18	32.0
Total	61,127,931	23,666,445	-----	----

a/ Source: Internal Revenue Service, Statistics of Income, 1960, Individual Income Tax Returns, Table 1, page 32.

b/ Source: Ibid., Table 0, page 14.

c/ Source: Table 48.

Table 49 (continued)

Income Brackets	(5) Hawaii Personal Income Tax Liability[d/] (Thousands of Dollars)	(6) Offset Factor (3) X (4)	(7) Dollar Offset (6) X (5)	(8) Hawaii Personal Income Tax After Offset (5) - (7) (Thousands of Dollars)
Under $ 2,000	509.3	.64	3.2	506.1
$ 2,000 - $ 2,999	976.6	3.43	33.5	943.1
$ 3,000 - $ 3,999	1,883.5	3.34	62.9	1,820.6
$ 4,000 - $ 4,999	2,107.5	4.58	96.5	2,011.0
$ 5,000 - $ 5,999	2,377.3	3.65	86.8	2,290.5
$ 6,000 - $ 6,999	2,637.1	8.76	231.0	2,406.1
$ 7,000 - $ 7,999	2,239.1	9.74	218.1	2,021.0
$ 8,000 - $ 8,999	2,383.5	8.84	210.7	2,172.8
$ 9,000 - $ 9,999	1,839.5	7.59	139.6	1,699.9
$10,000 - $14,999	5,932.4	15.49	918.9	5,013.5
$15,000 and over	6,984.7	26.94	1,881.7	5,103.0
Total	-------	-----	-------	-------

d/ Source: State of Hawaii, Department of Taxation, Patterns of Income, 1960, Individuals, page 12.

Table 50

Federal Personal Income Tax Offset
For Property, Fuel, And Excise Taxes

(Thousands of Dollars)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
		Property Tax			Federal Tax Offset for Property Tax		
Income Brackets	Offset Factor[a]	Estates and Trusts[b]	Consumer[c]		Estates and Trusts	Consumer	
	Percent	No Shifting	Conservative Shifting Assumption	Extensive Shifting Assumption	No Shifting (1) X (2)	Conservative Shifting Assumption (1) X (3)	Extensive Shifting Assumption (1) X (4)
Under $ 2,000	.64	30.9	933.8	1997.3	.2	6.0	12.8
$ 2,000 - $ 2,999	3.43	29.2	529.6	1164.7	1.0	18.2	39.9
$ 3,000 - $ 3,999	3.34	30.9	697.4	1576.7	1.0	23.3	52.7
$ 4,000 - $ 4,999	4.58	--	699.0	1609.0	--	32.0	73.7
$ 5,000 - $ 5,999	3.65	14.7	718.2	1655.8	.5	26.2	60.4
$ 6,000 - $ 6,999	8.76	45.8	622.8	1501.5	4.0	54.6	131.5
$ 7,000 - $ 7,999	9.74	50.1	555.0	1318.5	4.9	54.0	128.4
$ 8,000 - $ 8,999	8.84	9.1	492.7	1156.7	.8	43.6	102.2
$ 9,000 - $ 9,999	7.59	5.0	408.8	959.9	--	31.0	72.8
$10,000 - $14,999	15.49	51.1	1302.5	3184.9	7.9	201.8	493.3
$15,000 and over	26.94	586.2	738.2	1844.7	157.9	198.9	497.0
Total[d]	930.0	853.0	7698.0	17970.0	178.0	690.0	1665.0

a/ Source: Table 49.

b/ Source: Table 27.

c/ Source: Table 26.

d/ Columns may not sum to totals due to rounding.

Note: Refer to text, Chapter 4.

Table 50 (continued)

Income Brackets	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Property Tax After Federal Tax Offset			Fuel Tax		Federal Tax Offset For Fuel Tax		Fuel Tax After Federal Tax Offset	
	Estates and Trusts	Consumer		Consumer[e/]		Consumer		Consumer	
	No Shifting (2) - (5)	Conservative Shifting Assumption (3) - (6)	Extensive Shifting Assumption (4) - (7)	Conservative Shifting Assumption	Extensive Shifting Assumption	Conservative Shifting Assumption (1) X (11)	Extensive Shifting Assumption (1) X (12)	Conservative Shifting Assumption (11) - (13)	Extensive Shifting Assumption (12) - (14)
Under $ 2,000	30.7	927.8	1984.5	90.2	856.9	.6	5.5	89.6	851.4
$ 2,000 - $ 2,999	28.2	511.4	1124.8	263.5	774.5	9.0	26.6	254.5	747.9
$ 3,000 - $ 3,999	29.9	674.1	1524.0	424.5	1184.6	14.2	39.6	410.3	1145.0
$ 4,000 - $ 4,999	--	667.0	1535.3	722.6	1530.0	33.1	70.1	689.5	1459.9
$ 5,000 - $ 5,999	14.2	692.0	1595.4	667.8	1509.9	24.4	55.1	643.4	1454.8
$ 6,000 - $ 6,999	41.8	568.2	1370.0	900.2	1756.0	78.8	153.8	821.4	1602.2
$ 7,000 - $ 7,999	45.2	500.9	1190.1	687.2	1413.2	66.9	137.6	620.3	1275.6
$ 8,000 - $ 8,999	8.3	449.1	1054.4	529.2	1147.9	46.8	101.5	482.4	1046.4
$ 9,000 - $ 9,999	5.0	377.8	887.0	439.6	953.3	33.4	72.4	406.2	880.9
$10,000 - $14,999	43.2	1100.7	2691.6	1648.1	3542.3	255.3	548.7	1392.8	2993.6
$15,000 and over	428.3	539.3	1347.7	846.1	2120.1	227.9	571.2	618.2	1548.9
Total[d/]	675.0	7008.0	16305.0	7219.0	16789.0	790.0	1782.0	6429.0	15007.0

e/ Source: Table 26.

Table 50 (continued)

Income Brackets	(17) Allowable Excise Tax Deduction From Personal Income Tax (2% of A.G.I.)	(18) Theoretical Excise Tax Deduction From Personal Income Tax[e/] Conservative Shifting Assumption	(19) Extensive Shifting Assumption	(20) Allowable Offset For Excise Tax From Federal Personal Income Tax (1) X (17)	(21) Theoretical Offset For Excise Tax From Federal Personal Income Tax Conservative Shifting Assumption (1) X (18)	(22) Extensive Shifting Assumption (1) X (19)	(23) Excise Tax To Consumer After Allowable Federal Tax Offset Conservative Shifting Assumption (18) - (20)	(24) Extensive Shifting Assumption (19) - (20)
Under $ 2,000	789.3	2607.8	4231.3	5.0	16.7	27.1	2602.8	4226.3
$ 2,000 - $ 2,999	964.8	1691.8	2693.4	33.1	58.0	92.4	1658.7	2660.3
$ 3,000 - $ 3,999	1678.9	2527.1	3947.4	56.1	84.4	131.8	2471.0	3891.3
$ 4,000 - $ 4,999	1808.7	2868.5	4357.6	82.8	131.4	199.6	2785.7	4274.8
$ 5,000 - $ 5,999	1919.0	3001.1	4522.8	70.0	109.5	165.1	2931.1	4452.8
$ 6,000 - $ 6,999	2044.6	3111.2	4579.1	179.1	272.5	401.1	2932.1	4400.0
$ 7,000 - $ 7,999	1737.3	2637.2	3902.6	169.2	256.9	380.1	2468.0	3733.4
$ 8,000 - $ 8,999	1668.7	2247.2	3339.9	147.5	198.6	295.2	2099.7	3192.4
$ 9,000 - $ 9,999	1287.9	1863.2	2770.3	97.8	141.4	210.3	1765.4	2672.5
$10,000 - $14,999	3599.8	6772.7	9933.9	557.6	1049.1	2672.2	6215.1	9376.3
$15,000 and over	1882.2	4405.0	6281.0	507.1	1186.7	1689.6	3897.9	5773.9
Total	19381.0	33733.0	50560.0	1905.3	3505.0	6264.0	31828.0	48655.0

e/ Source: Table 23, columns 8 and 17.

Table 51

Federal Transfer Payments Distribution By Income Brackets

	(1)	(2)	(3)	(4)
Income Bracket	Percent of Transfer Receipts[a/]	Percent of Families[a/]	Cumulative Percent of Transfer Receipts	Cumulative Percent of Families
Under $ 2,000	16	14	16	14
$ 2,000 - $ 2,999	28	9	44	23
$ 3,000 - $ 3,999	18	9	62	32
$ 4,000 - $ 4,999	11	11	73	43
$ 5,000 - $ 7,499	15	28	88	71
$ 7,500 - $ 9,999	7	15	95	86
$10,000 and over	5	14	100	100
Total	100	100		

	(5)	(6)	(7)	(8)
Income Brackets	Number of Returns[b/] (U.S. as a whole)	Percent of Returns[b/]	Percent of Families (Gillespie's)	Cumulative Percent of Families
Under $ 2,000		23.6	14	14
$ 2,000 - $ 2,999		11.4	9	23
$ 3,000 - $ 3,999		11.3	9	32
$ 4,000 - $ 4,999		11.3	11	43
$ 5,000 - $ 5,999	6,422,593	10.6	14[c/]	57
$ 6,000 - $ 6,999	5,291,911	8.7	11[c/]	68
$ 7,000 - $ 7,999	3,888,676	6.4	8[c/]	76
$ 8,000 - $ 8,999	2,757,554	4.6	6[c/]	82
$ 9,000 - $ 9,999	1,905,564	3.1	4[c/]	86
$10,000 and over		9.0	14	100
Total	61,027,931	100.0	100	

a/ Source: W. I. Gillespie's mimeograph, "The Effect of Public Expenditures on the Distribution of Income", Tables A-1 and A-2, to be published by Brookings Institution.

b/ Source: Internal Revenue Service, Statistics of Income - 1960, Individual Income Tax Returns, Table 1, page 32.

c/ These percentages were estimated using Statistics data for U.S. as a whole. The method utilized is as follows: the number of returns given in Statistics for, say, the $5,000 - $5,999 bracket (call that N_1), was divided by the total number of returns for the $5,000 - $9,999 brackets (call that T). This proportion $\left(\frac{N_1}{T}\right)$, given in percent, is then multiplied by 43%, the percent of families in Gillespie's $5,000 - $9,999 brackets. The resulting percent is then taken to be the percent of families in the $5,000 - $5,999 bracket. The computation for each bracket is as follows:

	$\frac{N}{T}$
$5,000 - $5,999	31.5% X 43% = 14%
$6,000 - $6,999	26.1% X 43% = 11%
$7,000 - $7,999	19.2% X 43% = 8%
$8,000 - $8,999	13.8% X 43% = 6%
$9,000 - $9,999	9.4% X 43% = 4%.

Table 51 (continued)

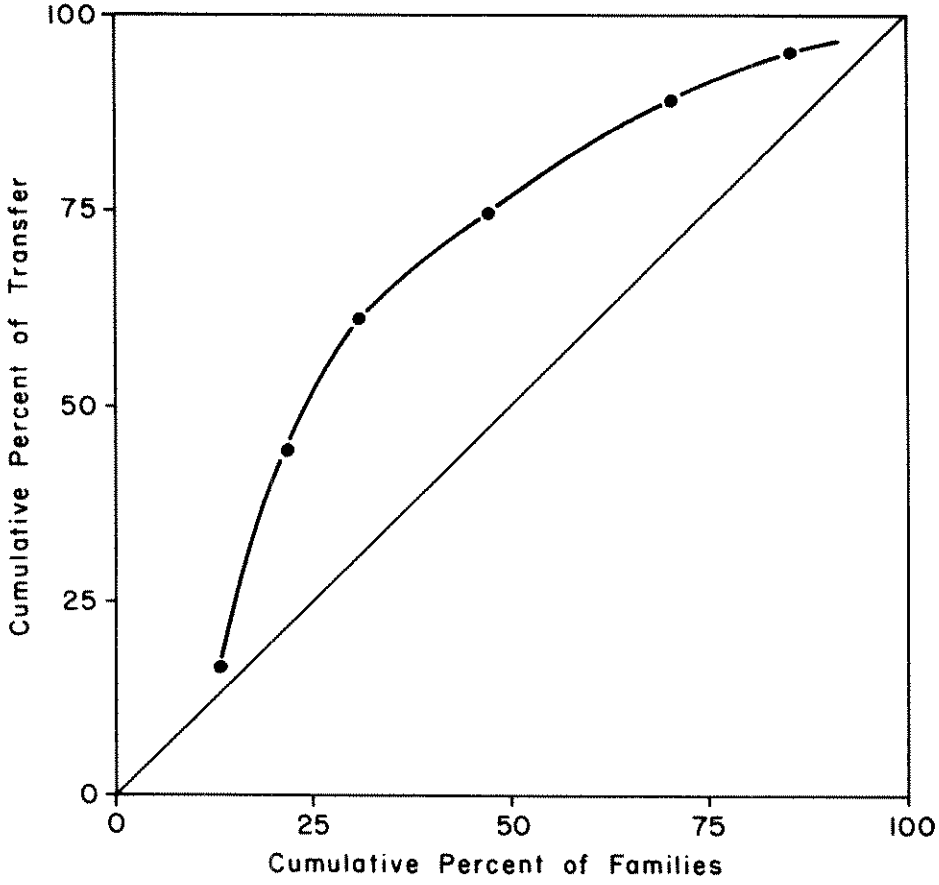


Table 52

Assignment Of Employer's Contribution To
Social Security To Income Brackets

(Thousands of Dollars)

	(1)	(2)	(3)	(4)	(5)	(6)
Income Brackets	Wages and Salaries[a]	Number of Returns[c]	Wages and Salaries (2) X ($4.800)	Employer's Contribution to Social Security (2) X (.03)	(3) X (.03)	Proportion of Contributions Percent
Under $ 1,000	13106	---	---	393.18	---	2.28
$ 1,000 - $ 1,999	21765	---	---	652.95	---	3.78
$ 2,000 - $ 2,999	43082	---	---	1292.46	---	7.48
$ 3,000 - $ 3,999	77822	---	---	2334.66	---	13.52
$ 4,000 - $ 4,999	84363	---	---	2530.89	---	14.65
$ 5,000 - $ 5,999	---	16176	77645	---	2329.35	13.49
$ 6,000 - $ 6,999	---	14963	71822	---	2154.66	12.48
$ 7,000 - $ 7,999	---	10142	48682	---	1460.46	8.46
$ 8,000 - $ 8,999	---	9208	44198	---	1325.94	7.67
$ 9,000 - $ 9,999	---	6293	30206	---	906.18	5.25
$10,000 - $14,999	---	13119	62971	---	1889.13	10.93
$15,000 and over	---	69901	335524	7204.14	10065.72	---
Total	240138	139802	671048	17269.86[b]		100.00

a/ State of Hawaii, Department of Taxation, Pattern of Income - 1960, Table 12, page 23. Salaries and Wage column, as adjusted; see Chapter 2, page 25, regarding the adjustment.

b/ The total amount of $29.1 million + $5.2 million (for State and Local) = $34.3 million; comes from Social Security Bulletin, Annual Statistical Supplement - 1960, Table 23, page 22. We used 1/2 of $34.3 million = $17.15 million since we want only employer contributions.

c/ Source: Table 14.

Note: Refer to text, Chapter 2.

Table 53

Assignment Of Unemployment
Insurance To Income Brackets

(Thousands of Dollars)

	(1)	(2)	(3)	(4)	(5)	(6)
Income Brackets	Wages and Salaries[a]	Number of Returns	Wages and Salaries	Unemployment Payments[b]		Proportion of Payments
			(2) X ($3000)	(1) X (.03)	(3) X (.03)	Percent
Under $ 1,000	13106	---	---	393.18	---	7.94
$ 1,000 - $ 1,999	21765	---	---	652.95	---	13.19
$ 2,000 - $ 2,999	43082	---	---	1292.46	---	26.10
$ 3,000 - $ 3,999	---	22329	66987	---	2009.61	40.59
$ 4,000 - $ 4,999	---	---	---	---	603.00[c]	12.18
$ 5,000 - $ 5,999	---	---	---	---	---	---
$ 6,000 - $ 6,999	---	---	---	---	---	---
$ 7,000 - $ 7,999	---	---	---	---	---	---
$ 8,000 - $ 8,999	---	---	---	---	---	---
$ 9,000 - $ 9,999	---	---	---	---	---	---
$10,000 - $ 14,999	---	---	---	---	---	---
Total	77953	22329	66987	4951.20		100.00

a/ State of Hawaii, Department of Taxation, Patterns of Income - 1960, Table 12, page 23 (Salaries and Wage column).

b/ Total amount is $4.951 million as reported in Social Security Bulletin, Annual Statistical Supplement - 1960, Table 15, page 14.

c/ Residual of the reported total minus the sum of the calculated assignments to the first four income brackets (i.e., $4.951 million - $4.348 million = $603 thousand).

Note: The method used in calculating these assignments are the same as for Social Security contributions (see Table 52 and text, Chapter 2, page 25). The application of this method here in the case of Unemployment Insurance is less satisfactory. However, there was no other procedure available.

Table 54

Distribution Of Federal Taxes Paid

(Thousands of Dollars)

Income Brackets	(1) Federal Personal Income Tax[a]	(2) Employee Contribution to Social Security[b]	(3) Estates and Trusts Tax[c]	(4) Gift Tax[d]	(5) Federal Excise Tax[e]
Under $ 2,000	3,184.7	1,046.1	-----	-----	2,857.5
$ 2,000 - $ 2,999	5,074.6	1,292.5	-----	-----	1,840.2
$ 3,000 - $ 3,999	8,612.9	2,334.7	-----	-----	2,760.3
$ 4,000 - $ 4,999	9,577.2	2,530.9	-----	-----	2,989.5
$ 5,000 - $ 5,999	9,498.9	2,329.4	-----	-----	3,065.9
$ 6,000 - $ 6,999	11,021.7	2,154.7	-----	-----	3,163.1
$ 7,000 - $ 7,999	9,976.3	1,460.5	-----	-----	2,673.5
$ 8,000 - $ 8,999	9,763.2	1,324.9	-----	-----	2,270.8
$ 9,000 - $ 9,999	7,579.6	906.2	-----	-----	1,885.4
$10,000 - $14,999	24,964.7	1,889.1	761.8	244.9	6,951.1
$15,000 and over	39,686.2	-------	678.2	218.1	4,263.7
Total[f]	138,940.0	17,269.0	1,440.0	463.0	34,721.0

a/ Source: Table 55.

b/ Source: Table 12. (Note: same distribution as Employer Contribution.)

c/ Source: Internal Revenue Service, Statistics of Income, 1960, Fiduciary, page 23.

d/ Source: Ibid., page 39.

e/ Total Federal Excise Tax for 1960 was $9,137,000,000 (Source: Economic Report of the President, 1964, page 275). Hawaii's share is estimated as .38% (Hawaii's share of total U.S. Adjusted Gross Income) or $34,721,000. This amount is allocated to income brackets via the All Goods and Services Expenditure Pattern (See Table 25).

f/ Columns may not sum to totals due to rounding.

Table 54 (continued)

Income Brackets	(6) Federal Corporate Income Tax[g] (1/3 Forward Shifting - Shifted Portion)	(7) Sub-Total (Zero Shifting) Sum (1) to (5)	(8) Sub-Total (1/3 Forward Shifting) Sum (1) to (6)	(9) Employer Contribution to Social Security[h] (Backward Shifting Assumed)
Under $ 2,000	2,299.6	7,088.3	9,387.9	1,046.1
$ 2,000 - $ 2,999	1,480.9	8,207.3	9,688.2	1,292.5
$ 3,000 - $ 3,999	2,221.4	13,707.9	15,929.3	2,334.7
$ 4,000 - $ 4,999	2,405.8	15,097.6	17,503.4	2,530.9
$ 5,000 - $ 5,999	2,467.3	14,894.2	17,361.5	2,329.4
$ 6,000 - $ 6,999	2,545.5	16,339.5	18,885.0	2,154.7
$ 7,000 - $ 7,999	2,151.5	14,110.3	16,261.8	1,460.5
$ 8,000 - $ 8,999	1,827.4	13,358.9	15,186.3	1,324.9
$ 9,000 - $ 9,999	1,517.2	10,371.2	11,888.4	906.2
$10,000 - $14,999	5,594.0	34,811.6	40,405.6	1,889.1
$15,000 and over	3,431.3	44,846.2	48,277.5	-------
Total[f]	27,942.0	192,833.0	220,775.0	17,269.0

g/ Total Federal Corporate Income Tax paid for 1960 was $21.494 billion (Source: Economic Report of the President, 1964, page 275). Hawaii's share is estimated as .39% (Hawaii's share of total U.S. dividend received). Assuming one-third forward shifting, the shifted portion of Hawaii's share is $27,942,000. This amount is allocated via the All Goods And Services Expenditure Pattern.

h/ See footnote b/.

Table 54 (continued)

Income Brackets	(10) Federal Corporate Income Tax[i/] (Zero Shifting)	(11) Federal Corporate Income Tax[i/] (1/3 Forward Shifting - Unshifted Portion)	(12) Sub-Total (Zero Shifting) (9) + (10)	(13) Sub-Total (1/3 Forward Shifting) (9) + (11)	(14) Total (Zero Shifting) (7) + (12)	(15) Total (1/3 Forward Shifting) (8) + (13)
Under $ 2,000	2,179.5	1,453.0	3,225.6	2,499.1	10,313.9	11,887.0
$ 2,000 - $ 2,999	1,416.7	944.4	2,709.2	2,236.9	10,916.5	11,925.1
$ 3,000 - $ 3,999	2,908.8	1,939.2	5,243.5	4,273.9	18,951.4	20,203.2
$ 4,000 - $ 4,999	2,363.9	1,576.0	4,894.8	4,106.9	19,992.4	21,610.3
$ 5,000 - $ 5,999	838.3	558.8	3,167.7	2,888.2	18,061.9	20,249.7
$ 6,000 - $ 6,999	4,224.9	2,816.6	6,379.6	4,971.3	22,719.1	23,856.3
$ 7,000 - $ 7,999	4,291.9	2,861.3	5,752.4	4,321.8	19,862.7	20,583.6
$ 8,000 - $ 8,999	3,302.8	2,201.9	4,627.7	3,526.8	17,986.6	18,713.1
$ 9,000 - $ 9,999	2,699.2	1,799.5	3,605.4	2,705.7	13,976.6	14,594.1
$10,000 - $14,999	9,925.1	6,616.8	11,814.2	8,505.9	46,625.8	48,911.5
$15,000 and over	49,675.9	33,117.4	49,675.9	33,117.4	94,522.1	81,394.9
Total[f/]	83,827.0	55,885.0	101,096.0	73,154.0	293,929.0	293,929.0

i/ Hawaii's share of total U.S. Federal Corporate Income Tax paid is (.0039) X ($21,494,000,000) = $83,827,000 (See footnote g/). Under the zero shifting assumption, this amount is allocated via the dividend distribution pattern (See Table 19). Under the one-third forward shifting assumption, 2/3 of $83,827,000 or $55,885,000 (unshifted portion), is allocated via the dividend distribution pattern.

Table 55

Distribution Of Federal Personal Income Tax Paid

(Thousands of Dollars)

Income Brackets	(1) A.G.I.[a] (Federal Data)	(2) Federal Income Tax Paid After Credits[a]	(3) Average Effective Rate (2) ÷ (1) (Percent)	(4) A.G.I.[b] (State Data)	(5) Personal Income Tax Assigned (3) X (4)
Under $ 2,000	41,288	3,331	8.07	39,463.916	3,184.7
$ 2,000 - $ 2,999	52,955	5,570	10.52	48,237.877	5,074.6
$ 3,000 - $ 3,999	91,891	9,428	10.26	83,946.358	8,612.9
$ 4,000 - $ 4,999	101,162	10,711	10.59	90,435.808	9,577.2
$ 5,000 - $ 5,999	120,295	11,904	9.90	95,948.886	9,498.9
$ 6,000 - $ 6,999	112,456	12,109	10.77	102,337.293	11,021.7
$ 7,000 - $ 7,999	87,236	10,020	11.49	86,825.910	9,976.3
$ 8,000 - $ 8,999	98,867	11,580	11.71	83,374.770	9,763.2
$ 9,000 - $ 9,999	76,512	9,002	11.76	64,452.837	7,579.6
$10,000 - $14,999	182,317	25,282	13.87	179,990.512	24,964.7
$15,000 and over	183,550	45,513	24.80	160,024.998	39,686.2
Total	1,148,529	154,450	100.00	1,035,039.165	138,940.0
$ 6,000 - $ 7,999	199,692	22,129	11.08	189,163.203	20,959.3
$ 8,000 - $ 9,999	175,379	20,582	11.74	147,827.607	17,355.0

a/ Source: Internal Revenue Service, Statistics of Income, 1960, Individuals, Table 17, page 80.

b/ Source: State of Hawaii Department of Taxation, Patterns of Income, 1960. See also Table 19.

Table 56

Relative Changes In The Average Total Tax Rates Due To Different Assumptions Regarding Shifting And Adjustment (Based On A.G.I.)

Income Brackets	I - II		I - III		I - IV	
	Conservative Shifting Assumption Without Adjustment Minus Conservative Shifting Assumption with Adjustment		Conservative Shifting Assumption Without Adjustment Minus Extensive Shifting Assumption without Adjustment		Conservative Shifting Assumption Without Adjustment Minus Extensive Shifting Assumption with Adjustment	
	Absolute	Percent	Absolute	Percent	Absolute	Percent
Under $ 2,000	2.61	15.25	- 5.70	- 33.31	- 5.15	- 30.10
$ 2,000 - $ 2,999	1.63	13.71	- 2.66	- 22.37	- 2.10	- 17.66
$ 3,000 - $ 3,999	1.72	14.83	- 1.91	- 16.47	- 1.35	- 11.64
$ 4,000 - $ 4,999	1.45	11.57	- 2.25	- 17.96	- 1.65	- 13.17
$ 5,000 - $ 5,999	.80	7.97	- 2.57	- 25.60	- 2.19	- 21.81
$ 6,000 - $ 6,999	2.40	21.84	- .87	- 7.92	.18	1.64
$ 7,000 - $ 7,999	2.78	24.43	- .57	- 5.01	.63	5.54
$ 8,000 - $ 8,999	2.32	22.22	- .66	- 6.32	.37	3.54
$ 9,000 - $ 9,999	2.37	21.57	- .73	- 6.64	.25	2.27
$10,000 - $14,999	3.66	25.38	- .51	- 3.54	1.40	9.71
$15,000 and over	14.99	51.18	13.17	44.96	18.18	62.07
Average	4.28	28.96	.79	5.35	2.42	16.37
Income Brackets	Absolute ÷ Average Absolute	Percent ÷ Average Percent	Absolute ÷ Average Absolute	Percent ÷ Average Percent	Absolute ÷ Average Absolute	Percent ÷ Average Percent
Under $ 2,000	.61	.53	- 7.22	6.23*	- 2.13	1.84*
$ 2,000 - $ 2,999	.38	.47	- 3.37	4.18*	- .87	1.08*
$ 3,000 - $ 3,999	.40	.51	- 2.42	3.08*	- .56	.71*
$ 4,000 - $ 4,999	.34	.40	- 2.85	3.36*	- .68	8.05*
$ 5,000 - $ 5,999	.19	.27	- 3.25	4.78*	- .90	1.33*
$ 6,000 - $ 6,999	.56	.75	- 1.10	1.48*	.07	.10
$ 7,000 - $ 7,999	.65	.84	- .72	.94*	.26	.34
$ 8,000 - $ 8,999	.54	.77	- .84	1.18*	.15	.22
$ 9,000 - $ 9,999	.55	.75	- .92	1.24*	.10	.14
$10,000 - $14,999	.86	.88	- .65	.66*	.58	.59
$15,000 and over	3.50	1.77	16.67	8.40	7.51	3.79

*The asterisk indicates that the underlying difference is of opposite sign compared to the average and the other entries in the column.

Table 57

Relative Changes In The Average Total Tax Rates Due To Different Income Concepts

Income Brackets	(1) Conservative Shifting Assumption Without Adjustment		(2) Extensive Shifting Assumption Without Adjustment		(3) Conservative Shifting Assumption With Adjustment		(4) Extensive Shifting Assumption With Adjustment	
	Adjusted Gross Income Vs. Broadened Income							
	Absolute	Percent	Absolute	Percent	Absolute	Percent	Absolute	Percent
Under $ 2,000	4.84	28.29	6.21	27.22	4.10	28.28	6.06	27.22
$ 2,000 - $ 2,999	3.81	32.04	4.59	31.55	3.29	32.07	4.41	31.52
$ 3,000 - $ 3,999	2.24	19.31	2.50	18.50	1.91	19.33	2.39	18.46
$ 4,000 - $ 4,999	1.79	14.29	2.01	13.60	1.58	14.26	1.92	13.54
$ 5,000 - $ 5,999	.92	9.16	1.12	8.88	.84	9.09	1.08	8.83
$ 6,000 - $ 6,999	1.24	11.28	1.20	10.12	.96	11.18	1.09	10.08
$ 7,000 - $ 7,999	1.30	11.42	1.19	9.96	.98	11.40	1.07	9.95
$ 8,000 - $ 8,999	.86	8.24	.78	7.03	.67	8.25	.71	7.05
$ 9,000 - $ 9,999	.95	8.64	.88	7.51	.74	8.58	.80	7.45
$10,000 - $14,999	1.39	9.64	1.19	7.97	1.03	9.57	1.04	7.99
$15,000 and over	10.03	34.24	4.69	29.09	4.90	34.27	3.23	29.07
Average	2.63	17.79	2.20	15.75	1.86	17.71	1.95	15.78
Income Brackets	Absolute ÷ Average Absolute	Percent ÷ Average Percent	Absolute ÷ Average Absolute	Percent ÷ Average Percent	Absolute ÷ Average Absolute	Percent ÷ Average Percent	Absolute ÷ Average Absolute	Percent ÷ Average Percent
Under $ 2,000	1.84	1.59	2.82	1.73	2.20	1.59	3.11	1.72
$ 2,000 - $ 2,999	1.45	1.80	2.09	2.00	1.77	1.81	2.26	1.99
$ 3,000 - $ 3,999	.85	1.08	1.14	1.17	1.03	1.09	1.23	1.16
$ 4,000 - $ 4,999	.68	.80	.91	.86	.85	.80	.98	.85
$ 5,000 - $ 5,999	.35	.51	.52	.56	.45	.51	.55	.55
$ 6,000 - $ 6,999	.47	.63	.55	.64	.52	.63	.56	.63
$ 7,000 - $ 7,999	.49	.64	.54	.63	.53	.64	.55	.63
$ 8,000 - $ 8,999	.33	.46	.35	.44	.36	.46	.36	.44
$ 9,000 - $ 9,999	.36	.48	.40	.47	.39	.48	.41	.47
$10,000 - $14,999	.53	.54	.54	.50	.55	.54	.53	.50
$15,000 and over	3.81	1.92	2.13	1.84	2.63	1.93	1.66	1.84

Table 57 (continued)

	(5)		(6)		(7)		(8)	
	Adjusted Gross Income Vs. Adjusted Gross Income Minus Federal Taxes							
Income Brackets	Conservative Shifting Assumption Without Adjustment		Extensive Shifting Assumption Without Adjustment		Conservative Shifting Assumption With Adjustment		Extensive Shifting Assumption With Adjustment	
	Absolute	Percent	Absolute	Percent	Absolute	Percent	Absolute	Percent
Under $ 2,000	- 3.74	- 21.86	- 7.13	- 31.26	- 3.18	- 21.93	- 6.95	- 31.22
$ 2,000 - $ 2,999	- 2.43	- 20.44	- 3.65	- 25.09	- 2.11	- 20.57	- 3.52	- 25.16
$ 3,000 - $ 3,999	- 2.27	- 19.57	- 3.16	- 23.39	- 1.92	- 19.43	- 3.03	- 23.40
$ 4,000 - $ 4,999	- 2.51	- 20.03	- 3.55	- 24.02	- 2.21	- 19.95	- 3.41	- 24.05
$ 5,000 - $ 5,999	- 1.84	- 18.33	- 2.79	- 22.13	- 1.70	- 18.40	- 2.70	- 22.08
$ 6,000 - $ 6,999	- 2.09	- 19.02	- 2.68	- 22.60	- 1.64	- 19.09	- 2.44	- 22.57
$ 7,000 - $ 7,999	- 2.20	- 19.33	- 2.75	- 23.01	- 1.67	- 19.42	- 2.48	- 23.07
$ 8,000 - $ 8,999	- 1.99	- 19.06	- 2.47	- 22.25	- 1.54	- 18.97	- 2.24	- 22.24
$ 9,000 - $ 9,999	- 2.11	- 19.20	- 2.65	- 22.61	- 1.66	- 19.26	- 2.44	- 22.72
$10,000 - $14,999	- 3.46	- 23.99	- 4.32	- 28.94	- 2.58	- 23.98	- 3.76	- 28.88
$15,000 and over	- 11.41	- 38.96	- 6.96	- 43.18	- 5.56	- 38.88	- 4.81	- 43.29
Average	- 3.38	- 22.87	- 3.79	- 27.09	- 2.40	- 22.86	- 3.35	- 27.10
Income Brackets	Absolute ÷ Average Absolute	Percent ÷ Average Percent	Absolute ÷ Average Absolute	Percent ÷ Average Percent	Absolute ÷ Average Absolute	Percent ÷ Average Percent	Absolute ÷ Average Absolute	Percent ÷ Average Percent
Under $ 2,000	1.11	.95	1.88	1.15	1.33	.95	2.07	1.52
$ 2,000 - $ 2,999	.72	.89	.96	.92	.88	.89	1.05	.92
$ 3,000 - $ 3,999	.67	.85	.83	.86	.80	.84	.90	.86
$ 4,000 - $ 4,999	.74	.87	.94	.88	.92	.87	1.02	.88
$ 5,000 - $ 5,999	.54	.80	.74	.81	.71	.80	.81	.81
$ 6,000 - $ 6,999	.62	.83	.71	.83	.68	.83	.73	.83
$ 7,000 - $ 7,999	.65	.84	.73	.84	.70	.84	.74	.85
$ 8,000 - $ 8,999	.59	.83	.65	.82	.64	.82	.69	.82
$ 9,000 - $ 9,999	.62	.83	.70	.83	.69	.84	.73	.83
$10,000 - $14,999	1.02	1.04	1.14	1.06	1.08	1.04	1.12	1.06
$15,000 and over	3.38	1.70	1.84	1.59	2.32	1.70	1.44	1.59

Table 57 (continued)

	(9)		(10)		(11)		(12)	
	Adjusted Gross Income Vs. Broadened Income Minus Federal Taxes							
Income Brackets	Conservative Shifting Assumption Without Adjustment		Extensive Shifting Assumption Without Adjustment		Conservative Shifting Assumption With Adjustment		Extensive Shifting Assumption With Adjustment	
	Absolute	Percent	Absolute	Percent	Absolute	Percent	Absolute	Percent
Under $ 2,000	2.01	11.75	1.55	6.80	1.70	11.72	1.52	6.83
$ 2,000 - $ 2,999	2.34	19.68	2.57	17.66	2.02	19.69	2.46	17.58
$ 3,000 - $ 3,999	.15	1.29	- .19	- 1.41	.14	1.42	- .18	- 1.39
$ 4,000 - $ 4,999	- .73	- 5.83	- 1.32	- 8.93	- .64	- 5.78	- 1.27	- 8.96
$ 5,000 - $ 5,999	- .97	- 9.66	- 1.62	- 12.85	- .89	- 9.63	- 1.57	- 12.84
$ 6,000 - $ 6,999	- 1.16	- 10.56	- 1.63	- 13.74	- .91	- 10.59	- 1.49	- 13.78
$ 7,000 - $ 7,999	- 1.26	- 11.07	- 1.72	- 14.39	- .96	- 11.16	- 1.56	- 14.51
$ 8,000 - $ 8,999	- 1.50	- 14.37	- 1.94	- 17.48	- 1.16	- 14.29	- 1.76	- 17.48
$ 9,000 - $ 9,999	- 1.53	- 13.92	- 2.00	- 17.06	- 1.20	- 13.92	- 1.84	- 17.13
$10,000 - $14,999	- 2.60	- 18.03	- 3.39	- 22.71	- 1.94	- 18.03	- 2.95	- 22.66
$15,000 and over	- 2.21	- 7.55	- 1.76	- 10.92	- 1.08	- 7.55	- 1.22	- 10.98
Average	- 1.08	- 7.31	- 1.51	- 10.79	- .77	- 7.33	- 1.33	- 10.76
Income Brackets	Absolute ÷ Average Absolute	Percent ÷ Average Percent	Absolute ÷ Average Absolute	Percent ÷ Average Percent	Absolute ÷ Average Absolute	Percent ÷ Average Percent	Absolute ÷ Average Absolute	Percent ÷ Average Percent
Under $ 2,000	1.86*	1.60*	1.03*	.63*	2.21*	1.59*	1.14*	.63*
$ 2,000 - $ 2,999	2.17*	2.69*	1.70*	1.63*	2.62*	2.68*	1.85*	1.63*
$ 3,000 - $ 3,999	.14*	.17*	.13	.13	.18*	.19*	.14	.12
$ 4,000 - $ 4,999	.68	.79	.87	.82	.83	.78	.95	.83
$ 5,000 - $ 5,999	.89	1.32	1.07	1.19	1.16	1.31	1.18	1.19
$ 6,000 - $ 6,999	1.07	1.44	1.08	1.27	1.18	1.44	1.12	1.28
$ 7,000 - $ 7,999	1.17	1.51	1.14	1.33	1.25	1.52	1.17	1.34
$ 8,000 - $ 8,999	1.39	1.96	1.28	1.62	1.51	1.94	1.32	1.62
$ 9,000 - $ 9,999	1.42	1.90	1.32	1.58	1.56	1.89	1.38	1.59
$10,000 - $14,999	2.41	2.46	2.25	2.10	2.52	2.45	2.22	2.10
$15,000 and over	2.05	1.03	1.17	1.01	1.40	1.03	.92	1.02

*The asterisk indicates that the underlying difference is of opposite sign compared to the average and the other entries in the column.

Table 58

Adjustment Of A.G.I. And Broadened Income To Account For Nonshifted Portion Of Business Taxes
(And Adjusted Tax Rate Estimates)

(Thousands of Dollars)

Income Brackets	(1) Conservative Shifting Assumption: Nonshifted Portion of Business Taxes Assigned to Corporate Profits	(2) Conservative Shifting Assumption: Nonshifted Portion of Business Taxes Assigned to Noncorporate Profits	(3) Total (1) + (2)	(4) A.G.I.	(5) Adjusted A.G.I. (3) + (4)	(6) Total Tax	(7) Average Effective Tax Rate (6) ÷ (5) (Percent)
Under $ 2,000	1,090.3	706.7	1,797.0	39,464.0	41,261.0	6,751.3	16.36
$ 2,000 - $ 2,999	708.5	588.0	1,296.5	48,237.9	49,534.4	5,734.1	11.57
$ 3,000 - $ 3,999	1,455.0	692.7	2,147.7	83,946.4	86,094.1	9,739.8	11.31
$ 4,000 - $ 4,999	1,182.3	627.5	1,809.8	90,435.8	92,245.6	11,332.4	12.28
$ 5,000 - $ 5,999	419.4	935.9	1,355.3	95,948.9	97,304.2	9,630.9	9.89
$ 6,000 - $ 6,999	2,113.4	1,114.9	3,228.3	102,299.5	105,527.8	11,242.6	10.65
$ 7,000 - $ 7,999	2,146.9	975.3	3,122.2	86,863.7	89,985.9	9,881.2	10.98
$ 8,000 - $ 8,999	1,652.1	852.0	2,504.1	83,433.9	85,938.0	8,711.0	10.13
$ 9,000 - $ 9,999	1,350.2	718.3	2,068.5	64,393.7	66,462.2	7,079.6	10.65
$10,000 - $14,999	4,964.9	3,232.3	8,197.2	179,990.5	188,187.7	25,953.4	13.79
$15,000 and over	24,850.5	7,707.6	32,558.1	160,025.0	192,583.1	46,873.6	24.33
Total	41,933.5	18,151.2	60,084.7	1,035,039.3	1,095,124.0	152,929.9	13.96
After Adjustment							
Under $ 2,000	246.0	537.4	783.4	39,464.0	40,247.4	5,722.9	14.21
$ 2,000 - $ 2,999	159.4	447.3	606.7	48,237.9	48,844.6	4,950.5	10.13
$ 3,000 - $ 3,999	328.4	526.2	854.6	83,946.4	84,801.0	8,290.2	9.77
$ 4,000 - $ 4,999	267.2	470.8	738.0	90,435.8	91,173.8	10,016.2	10.98
$ 5,000 - $ 5,999	94.7	705.1	799.8	95,948.9	96,748.7	8,868.0	9.16
$ 6,000 - $ 6,999	477.1	843.6	1,320.7	102,299.5	103,620.2	8,791.5	8.48
$ 7,000 - $ 7,999	484.7	739.2	1,223.9	86,863.7	88,087.6	7,474.6	8.48
$ 8,000 - $ 8,999	373.0	640.3	1,013.3	83,433.9	84,447.2	6,771.6	8.01
$ 9,000 - $ 9,999	304.8	540.0	844.8	64,393.7	65,238.5	5,554.1	8.51
$10,000 - $14,999	1,120.9	2,429.1	3,550.0	179,990.5	183,540.5	19,372.6	10.55
$15,000 and over	5,610.7	5,769.3	11,380.0	160,025.0	171,405.0	22,879.9	13.34
Total	9,466.9	13,648.3	23,115.2	1,035,039.3	1,058,154.5	108,692.1	10.27

Table 58 (continued)

Income Brackets	(8) Broadened Income Conservative Shifting Assumption	(9) Adjusted Broadened Income (3) + (8)	(10) Average Effective Tax Rate (6) ÷ (9) (Percent)	(11) Extensive Shifting Assumption: Nonshifted Portion of Business Taxes Assigned to Corporate Profits	(12) Extensive Shifting Assumption: Nonshifted Portion of Business Taxes Assigned to Noncorporate Profits	(13) Total (11) + (12)
Under $ 2,000	55,014.1	56,811.1	11.88	237.3	61.9	299.2
$ 2,000 - $ 2,999	70,980.6	72,277.1	7.93	154.1	83.0	237.1
$ 3,000 - $ 3,999	104,117.8	106,265.5	9.16	316.7	79.6	396.3
$ 4,000 - $ 4,999	105,476.1	107,285.9	10.56	257.3	64.0	321.3
$ 5,000 - $ 5,999	105,565.0	106,920.3	9.00	91.2	107.8	199.0
$ 6,000 - $ 6,999	115,264.4	118,492.7	9.48	460.0	120.0	580.0
$ 7,000 - $ 7,999	98,015.4	101,137.6	9.77	467.2	115.1	582.3
$ 8,000 - $ 8,999	90,923.9	93,428.0	9.32	359.6	82.7	442.3
$ 9,000 - $ 9,999	70,526.1	72,594.6	9.75	293.8	68.2	362.0
$10,000 - $14,999	199,123.8	207,321.0	12.51	1,080.6	363.2	1,443.8
$15,000 and over	243,334.2	275,892.3	16.98	5,408.6	1,358.4	6,767.0
Total	1,258,341.4	1,318,426.1	11.59	9,126.4	2,503.9	11,630.3
After Adjustment						
Under $ 2,000	55,014.1	55,797.5	10.25	53.1	53.9	107.0
$ 2,000 - $ 2,999	70,980.6	71,587.3	6.91	34.4	68.5	102.9
$ 3,000 - $ 3,999	104,117.8	104,972.4	7.89	71.0	66.4	137.4
$ 4,000 - $ 4,999	105,476.1	106,214.1	9.43	57.6	48.0	105.6
$ 5,000 - $ 5,999	105,565.0	106,364.8	8.33	20.5	84.0	104.5
$ 6,000 - $ 6,999	115,266.4	116,585.1	7.54	103.0	97.5	200.5
$ 7,000 - $ 7,999	98,015.4	99,239.3	7.53	104.7	93.9	198.6
$ 8,000 - $ 8,999	90,923.9	91,937.2	7.36	80.6	63.5	144.1
$ 9,000 - $ 9,999	70,526.1	71,066.1	7.81	65.8	52.4	118.2
$10,000 - $14,999	199,123.8	202,573.8	9.56	242.2	277.2	519.4
$15,000 and over	243,334.2	254,714.2	8.98	1,212.2	1,007.5	2,219.7
Total	1,258,341.4	1,281,456.6	8.48	2,045.1	1,912.8	3,957.9

Table 58 (continued)

Income Brackets	(14) Adjusted A.G.I. (4) + (13)	(15) Broadened Income Conservative Shifting Assumption	(16) Adjusted Broadened Income (13) + (15)	(17) Total Tax	(18) Average Effective Tax Rate (17) ÷ (14) (Percent)	(19) Average Effective Tax Rate (17) ÷ (16) (Percent)
Under $ 2,000	39,763.2	54,238.1	54,537.3	9,003.6	22.64	16.50
$ 2,000 - $ 2,999	48,475.0	70,476.2	70,713.3	7,017.3	14.47	9.92
$ 3,000 - $ 3,999	84,342.7	102,982.3	103,378.6	11,340.4	13.44	10.96
$ 4,000 - $ 4,999	90,757.1	104,634.3	104,955.6	13,366.6	14.72	12.73
$ 5,000 - $ 5,999	96,147.9	105,266.5	105,465.5	12,099.9	12.58	11.47
$ 6,000 - $ 6,999	102,879.5	113,760.3	114,340.3	12,129.7	11.79	10.60
$ 7,000 - $ 7,999	87,446.0	96,487.3	97,069.6	10,378.3	11.86	10.69
$ 8,000 - $ 8,999	83,876.2	89,749.1	90,191.4	9,264.6	11.04	10.27
$ 9,000 - $ 9,999	64,755.7	69,565.2	69,927.2	7,544.2	11.65	10.78
$10,000 - $14,999	181,434.3	195,590.3	197,034.1	26,872.4	14.81	13.63
$15,000 and over	166,792.0	225,648.2	232,415.2	25,790.1	15.46	11.09
Total	1,046,669.6	1,228,397.8	1,240,028.1	144,807.1	13.83	11.67
After Adjustment						
Under $ 2,000	39,571.0	54,238.1	54,345.1	8,784.9	22.20	16.16
$ 2,000 - $ 2,999	48,340.8	70,476.2	70,579.1	6,750.0	13.96	9.56
$ 3,000 - $ 3,999	84,083.8	102,982.3	103,119.7	10,870.2	12.92	10.54
$ 4,000 - $ 4,999	90,541.4	104,634.3	104,739.9	12,827.8	14.16	12.24
$ 5,000 - $ 5,999	96,053.4	105,266.5	105,371.0	11,733.1	12.21	11.13
$ 6,000 - $ 6,999	102,500.0	113,760.3	113,960.8	11,054.8	10.78	9.70
$ 7,000 - $ 7,999	87,062.3	96,487.3	96,685.9	9,341.3	10.72	9.66
$ 8,000 - $ 8,999	83,578.0	89,769.1	89,913.2	8,404.4	10.05	9.35
$ 9,000 - $ 9,999	64,511.9	69,565.2	69,683.4	6,917.7	10.72	9.92
$10,000 - $14,999	180,509.9	195,590.3	196,109.7	23,429.5	12.97	11.94
$15,000 and over	162,244.7	225,648.2	227,867.9	17,785.8	10.96	7.80
Total	1,038,997.2	1,228,397.8	1,232,375.7	127,899.5	12.30	10.37